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# MEDICAL ANNALS

## *of the*

## DISTRICT OF COLUMBIA

Official Publication of
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

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**VOLUME XXVI**
**1957**

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MEDICAL ANNALS
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VOLUME XXVI *January*, 1957 NUMBER 1

# THE SOLITARY PULMONARY NODULE*

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LABELED indiscriminately by the laity as a "spot on the lung" and rather inappropriately referred to in the recent medical literature as a "coin lesion," the solitary pulmonary nodule is a common problem as attested by one eminent radiologist who termed it the most urgent problem facing the radiologist today.[1]

In 1946 one of us (E. W. D.)[2] instituted the original study of this entity, stressing the inordinately high percentage of malignant nodules, hence the need for earlier operation. Since then we,[3, 4] among others, have reiterated this point and in a recent review[5] have also called attention to several other important aspects of the problem, namely, the favorable prognosis of bronchial carcinomas presenting as a solitary nodule and resected in the asymptomatic phase and the fungal origin of most so-called "tuberculomas." Even so, there is still too little awareness of the hazards inherent in this type of lesion. All too often patients are referred for surgery only after months or even years of observation, by which time, if the patient still survives, the tumor is large and unresectable. The problem, instead of being resolved, has been greatly compounded by the more liberal use of routine and survey X-ray films of the chest. The futility of attempting to distinguish radiographically between the benign and malignant nodule is demonstrated in figure 1.

Case selection has been based upon essentially the same radiographic criteria laid down in the original study[2]:

1. The nodule must be 6 cm. or less in diameter.
2. It must be solitary, although small satellite lesions do not preclude its inclusion.
3. It must appear to lie within the pulmonary parenchyma, thus excluding all obvious hilar, mediastinal, diaphragmatic, and chest-wall masses.
4. Its shape is round or ovoid.
5. Its margin is circumscribed and smooth.
6. There must be no demonstrable calcium nor cavitation within the nodule.
7. There must be minimal, if any, associated pneumonitis, atelectasis, or regional lymphade-

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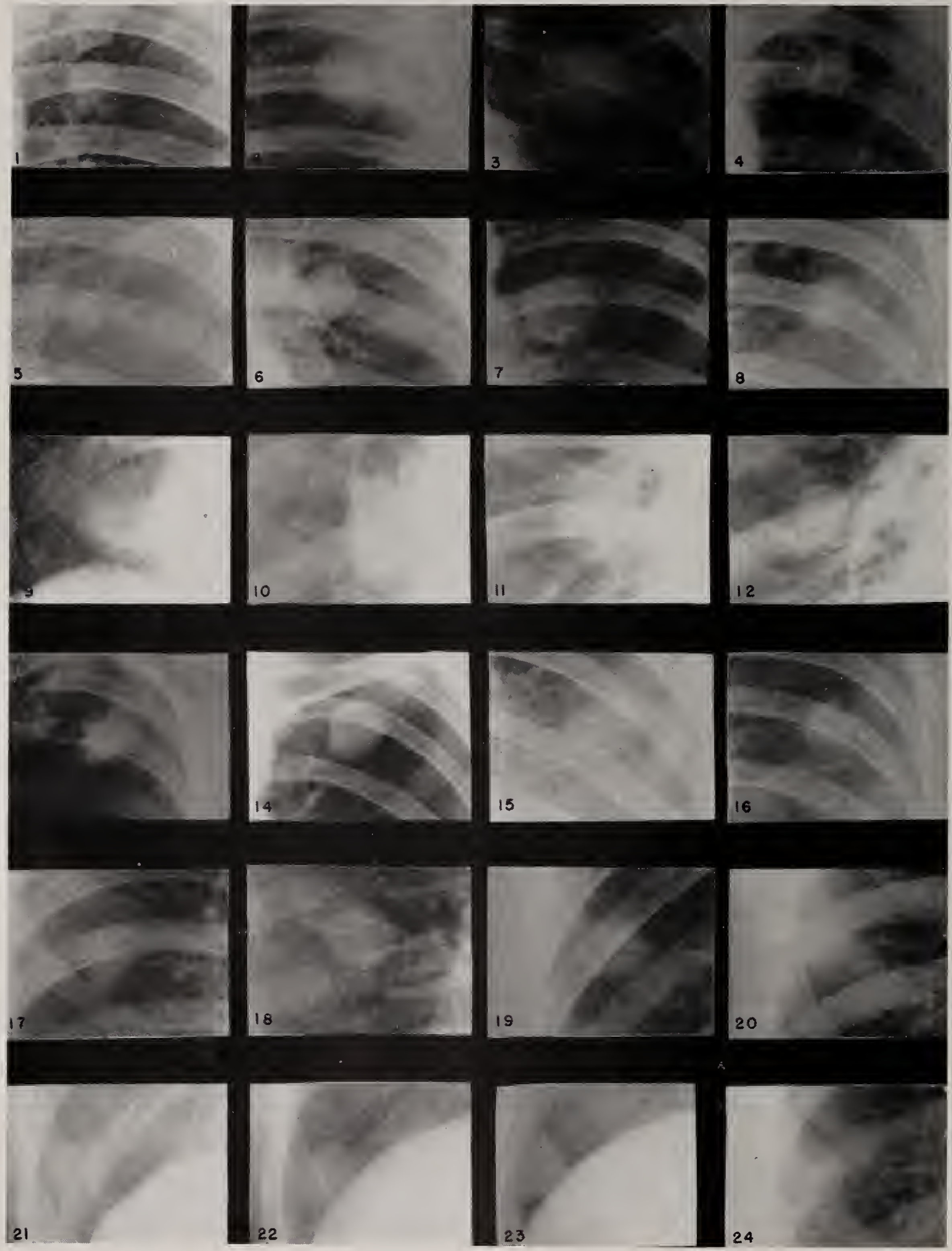
# THE SOLITARY PULMONARY NODULE

## Benign or Malignant?



nopathy. An absence of symptoms has not been required.

Our experience is based on 215 cases, each of which has been carefully selected according to these strict radiologic criteria, and which combined constitute the largest personal series of solitary nodules so far collected. This does not represent the total number of cases seen, since we have always regarded the partially calcified nodule as relatively innocuous and have been content to observe a goodly number of them. We are firmly convinced that the exclusion of calcified and cavitary lesions from this series accounts for the somewhat higher percentage of malignancy in our group, as witness the Mayo Clinic series[6] in which the percentage of malignancy rose from 35 to 42 per cent simply by dropping the nodules with radiographically demonstrable calcification.

Of these 215 cases 101 (47 per cent) were malignant. Ten of these were metastatic, but the remaining 91 (42 per cent) were primary pulmonary neoplasms. Nine were bronchial adenomas, which in keeping with their malignant propensities have been classified with the malignant tumors. The remainder include 79 bronchogenic carcinomas, 1 fibrosarcoma, 1 leiomyosarcoma and 1 lymphoblastoma (table 1).

Of the benign nodules more than two-thirds were granulomas. Wherever possible the tissue blocks from these cases have been resectioned and meticulously studied by Ziehl-Neelsen, periodic acid-Schiff and Gridley stains. In this way it has been possible to establish a specific etiology in four-fifths of the cases. Histoplasmas have been demonstrated in 40 lesions or over one-half of all granulomas studied. Coccidioides were found in 5 cases and tubercle bacilli in 12. Two of the latter cases actually represented blocked tuberculous cavities, and *M. tuberculosis* was easily recovered in culture. Despite exhaustive examination no organisms could be identified in 12 cases, and these have been properly labeled nonspecific. Tissue was no longer available in 15 cases, and these are classified simply as granulomas.

TABLE 1
*215 Solitary Pulmonary Nodules*

| Lesion | | Cases |
|---|---|---|
| Bronchogenic carcinoma | | 79 (36.3%) |
| Squamous carcinoma | 34 | |
| Adenocarcinoma | 27 | |
| Bronchiolar carcinoma | 9 | |
| Undifferentiated carcinoma | 9 | |
| Bronchial adenoma | | 9 |
| Fibrosarcoma | | 1 |
| Leiomyosarcoma | | 1 |
| Lymphoblastoma | | 1 |
| Metastatic tumor | | 10 |
| Total malignant | | 101 (47%) |
| Granuloma | | 82 (38.1%) |
| Hamartoma | | 9 |
| Pleural mesothelioma | | 6 |
| Chronic pneumonitis | | 4 |
| Bronchogenic cyst | | 3 |
| Bronchopulmonary sequestration | | 3 |
| Neurofibroma | | 2 |
| Chronic lung abscess | | 2 |
| Lipoid granuloma | | 1 |
| Hyperplastic lymph node | | 1 |
| "Aspergilloma" | | 1 |
| Total benign | | 114 (53%) |

There are 17 benign tumors in the series. The most common benign tumor in our group—and this has also been true of combined reported series—is the hamartoma (9 cases); the next most common is the pleural mesothelioma (6 cases). The other 2 benign tumors were neurofibromas. Various miscellaneous lesions incorporated in the series are shown in table 1.

Among the 79 bronchogenic carcinomas 9 occurred in the 30- to 39-year age group, the youngest being 32. In the same age group our

FIG. 1. Regardless of one's qualifications it is virtually impossible to distinguish radiographically between benign and malignant nodules. Half of the nodules shown here proved to be primary bronchial carcinomas, which approximates the percentage of malignancy found in this type lesion. Those who contend they can select those nodules that should be excised and those that can be safely observed would do well to attempt to do so with this series. See page 7 for histologic diagnoses.

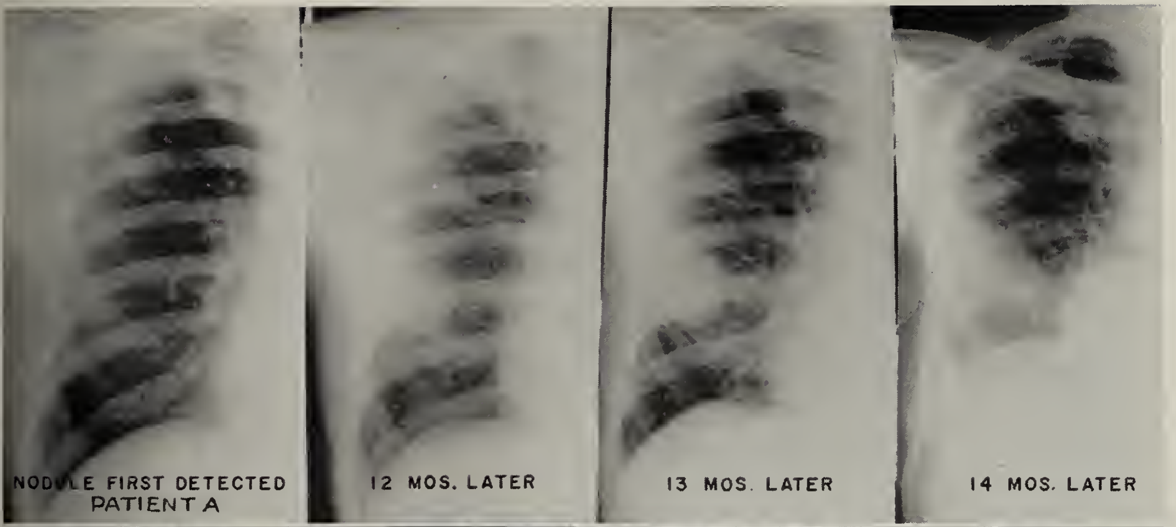
series contains 3 other malignant tumors, which makes a total of 12 malignant tumors as opposed to 27 benign nodules in patients less than 40 years old. To us this is an extremely important finding, since although some have held that the chance of malignancy in patients less than 40 with pulmonary nodules is practically nil, our experience would indicate that the chance of such a nodule being malignant in the 30- to 39-year age group is almost 1 in 3. In the 40- to 49-year age group the incidence of carcinoma was practically 50 per cent, and this was even higher in the older age groups. In other words, regardless of the patient's age, the chance of malignancy remains high. Likewise, neither the patient's sex, the size and location of the nodule, nor the presence or absence of symptoms gave any sure clue to diagnosis.

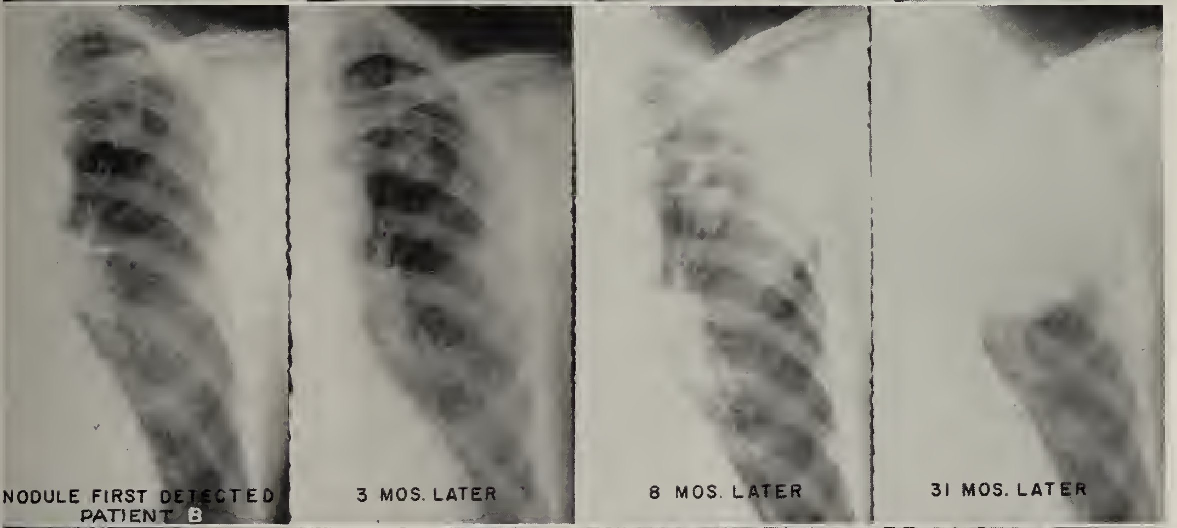
Because assorted clinical and laboratory examinations have been almost worthless as a preoperative guide to an exact diagnosis, we now see little point in putting these patients through an extensive preliminary workup. The one exception to this general rule is the nodule in which a significant amount of calcium can be demonstrated, and then the likelihood of benignity is almost guaranteed. Especially is this true of nodules with a relatively large central core of calcium, those that present concentric laminations, an inner ring or an outer rim of calcium, and those that are diffusely stippled or completely calcified. On the other hand, merely a fleck or two of calcium within the lesion is much less reassuring, and these we are afraid to treat by watchful waiting since a number have proved to be malignant, including 1 of our own.[7] Except for the presence of calcification, other roentgenologic findings such as size, sharpness of margin, growth, density, etc. provide a most deceptive guide to management (figure 1).

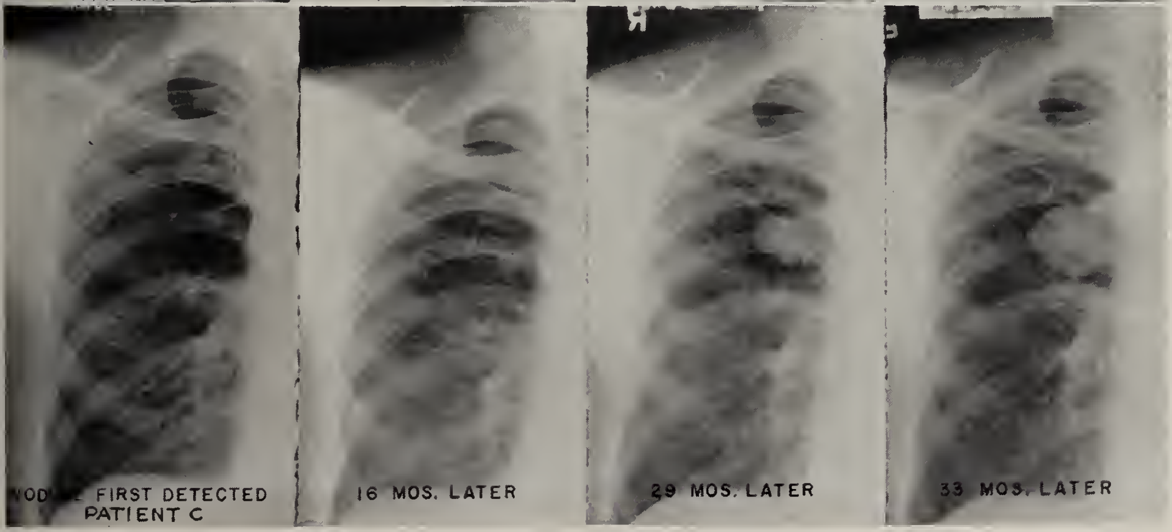
In the final analysis the one dependable diagnostic aid, in fact, the only uniformly reliable one outside of autopsy, is thoracotomy. Fortunately, this carries as an added dividend the opportunity to excise the lesion, which in most instances is the treatment of choice anyway. Our mortality rate with thoracotomy plus a limited resection (108 cases) has been nil. Even among those treated by lobectomy or pneumonectomy (107 patients) there have been only 4 hospital deaths. The absence of any mortality from exploration and limited resection alone, the reasonably low mortality rate following more radical resection, and the absence of any appreciable morbidity except in cases of carcinoma and tuberculosis, where it might be anticipated anyway, provide what we consider convincing proof of the safety in exploring every patient with a solitary, noncalcified pulmonary nodule.

Besides being the most important single entity included among the solitary pulmonary nodules, bronchial carcinoma rivals the granulomas as the most common. In our series there were 79 bronchial carcinomas (36.7 per cent) as compared with 82 granulomas (38.1 per cent), these 2 lesions together accounting for three-quarters of our series. The overall results in the surgical management of the malignant solitary nodule, while far from ideal, manifest little of the pessimistic overtones generally ascribed to bronchial carcinoma. In this series, out of 79 patients with bronchial carcinoma 34 are still alive in seemingly good health, while 2 other patients were free of recurrent carcinoma at the time of their deaths, 8 and 5 years postoperatively, from unrelated courses. This is not as gloomy a picture as it might at first appear to be, considering that of the 43 patients who did not survive, 28 of them had had their pulmonary nodules

FIG. 2. Serial chest roentgenograms of 3 patients whose physicians saw fit to observe the small nodules shown in the first films. All 3 patients were initially asymptomatic. The effect of neglect will vary from case to case. Thus patient A was hopelessly inoperable within 14 months; the lesion of patient B was unresectable at operation which was performed over 31 months after discovery of the lesion; the lesion of patient C, despite a delay of 33 months between detection and resection, was resectable, but the magnitude of surgery was increased to the point that portions of the trachea and superior vena cava had to be excised and grafted. By contrast, for every 4 primary carcinomatous nodules excised promptly in the asymptomatic phase, 3 will be cured, a cure rate of 75 per cent!


NODULE FIRST DETECTED
PATIENT A
12 MOS. LATER
13 MOS. LATER
14 MOS. LATER


NODULE FIRST DETECTED
PATIENT B
3 MOS. LATER
8 MOS. LATER
31 MOS. LATER


NODULE FIRST DETECTED
PATIENT C
16 MOS. LATER
29 MOS. LATER
33 MOS. LATER

followed by their physician for periods in excess of 6 months, and 20 of these had actually had the growth of their nodules checked periodically for over a year (figure 2). Obviously, many forfeited their chance for cure long before being referred for surgical consultation. The influence of delay in operation upon ultimate survivorship is most emphatically shown in figures 3 and 4.

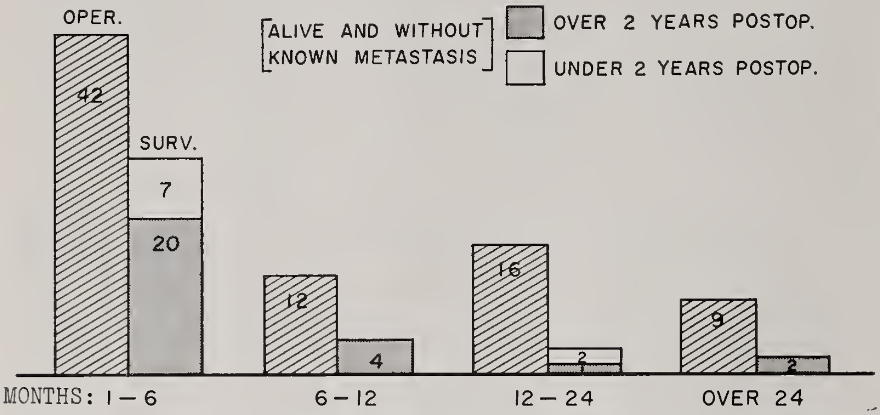


FIG. 3. Here the effect of neglect is graphically illustrated, showing the high percentage of long survivorship among those with bronchial carcinomas operated upon promptly and the contrastingly poor salvage rate when the nodule has been observed for varying periods of time.

Likewise, the presence of symptoms, or preferably their absence, had a striking influence upon survivorship. This is seen in figure 4. Out of the 79 patients with bronchial carcinoma, 65 were asymptomatic when the radiographic density was first detected. As a reflection of the long periods of observation forced upon so many of these patients, an additional 23 developed symptoms before coming to operation, so that at the time of thoracotomy 37 patients had symptoms whereas 42 had none. Of the 42 who were symptom-free, 31 (74 per cent) are surviving in apparent good health without evidence of recurrent carcinoma. Nine of the survivors are admittedly less than 2 years postoperative, but even discounting these there are still 2 survivors out of every 3 patients with solitary circumscribed bronchial carcinomas operated upon in the asymptomatic phase. By contrast, among the 37 patients operated upon after the appearance of symptoms only 5 survive (13 per cent). Thus, the chief deterrent to a happier outlook for bronchial carcinoma presenting as a solitary nodule is neglect.

Our experience leads us to believe that any patient with a small solitary circumscribed asymptomatic bronchial carcinoma picked up in a fortuitous chest roentgenogram has a good chance for complete cure if operated upon promptly. Thirty-two of our patients fall into this category, and 24 (75 per cent) survive in apparent good health. Out of this group there were 14 operated upon over 5 years ago and 11 (78 per cent) are alive and well today. Although the number of cases quoted is much too small to assume statistical significance, it suggests that the 5-year survival rate in bronchial carcinoma so situated and so handled approaches 75 per cent. This is further supported by the almost identical results recently reported in a similar study by Paulson.[8]

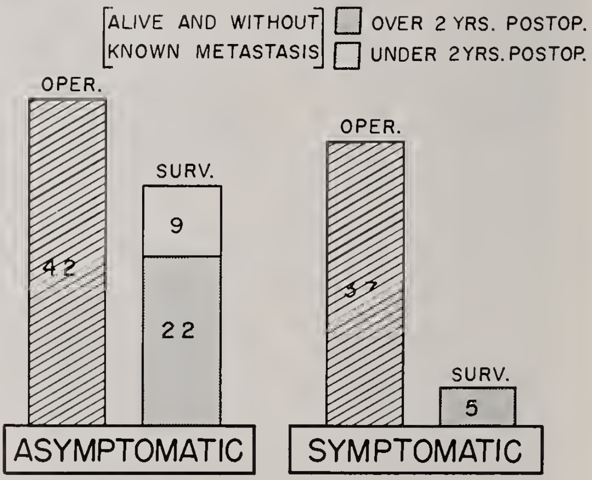


FIG. 4. Of those patients with bronchial carcinoma one of the main factors determining survival was the presence or absence of symptoms. Of those without symptoms 74 per cent have apparently been cured, while among those with symptoms only 13 per cent survive.

## CONCLUSIONS

The inescapable conclusions are these:

1. The chance of malignancy in any solitary, noncalcified pulmonary nodule is high, approximating 50 per cent in the older patient and almost 30 per cent in patients 30 to 39 years of age.

2. There exist no reliable clinical, laboratory, or radiographic means, unless it be the presence of calcification, for differentiating between the benign and malignant nodule.

3. Thoracotomy is mandatory.

4. For those with bronchial carcinoma the absence of symptoms and promptness of operation are apt to determine the possibility of cure.

5. A careful histologic study of the so-called "tuberculoma" will show the majority to be of fungal rather than tuberculous origin.

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FIG. 1. Histologic diagnoses (see page 2).
All nodules in the first and last vertical columns are malignant.

1. Bronchial carcinoma
2. Histoplasmoma
3. Hamartoma
4. Bronchial carcinoma
5. Bronchial carcinoma
6. Hamartoma
7. Neurofibroma
8. Bronchial carcinoma
9. Bronchial carcinoma
10. Bronchopulmonary sequestration
11. Histoplasmic lymphadenitis
12. Bronchial carcinoma
13. Bronchiolar carcinoma
14. Tuberculoma
15. Coccidioma
16. Bronchial carcinoma
17. Bronchial carcinoma
18. Histoplasmoma
19. Bronchial adenoma
20. Bronchial carcinoma
21. Bronchial carcinoma
22. Histoplasmoma
23. Hamartoma
24. Bronchial carcinoma

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# THE TRANSAMINASE TEST IN MYOCARDIAL INFARCTION

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THERE IS A SIGNIFICANT number of cases of acute myocardial infarction in which an unequivocal diagnosis cannot be made by the usual clinical, laboratory or electrocardiographic procedures. The detection of increasing amounts of the enzyme, glutamic-oxalacetic transaminase (S-GOT) in the serum following myocardial infarction appears to offer a new means of establishing this diagnosis.[1] The test is available as a relatively simple spectrophotometric assay, 20 to 30 of which can be done per day by a trained technician.[2] This report relates our experience with this method in patients admitted to the hospital suspected of having myocardial infarction. The details governing the collection of data are reported elsewhere.[3]

Serum-GOT was determined by a modification of the method of Karmen, Wroblewski and LaDue.[4] The enzyme is widely distributed in all body tissues with highest concentration in heart muscle.[5] The normal for serum is 5 to 33 units per ml. As necrosis of the myocardium occurs the enzyme apparently escapes from the injured cell into the serum, and levels 2 to 30 times normal are seen.

## TRANSMURAL INFARCTS

Following an acute transmural myocardial infarction the amount of enzyme in the serum increases rapidly, reaching a peak of about 160 units per ml. 24 hours after the onset of symptoms. Elevations have been recorded as early as 2 hours after onset of an attack. There is an equally characteristic but less rapid descent, normal values being reached by about the fifth day.

The characteristically evolving curve of transaminase activity (figure 1) following an acute myocardial infarct is often more diagnostic than a single high value. Hence it is important to obtain a specimen promptly after the onset of symptoms and at daily intervals thereafter for a total of at least 4 determinations.

There appears to be a semiquantitative relationship between the serum level of transaminase and the size of the infarct. This observation has been emphasized by Nydick and associates,[6] who found that the rise of serum transaminase was proportional to the size of the infarct produced in the experimental animal.

Serum transaminase has shown no correlation with the leukocyte count or sedimentation rate. However, elevated body temperature seems to parallel the rise in S-GOT. We have found the test to be of limited value in prognosis despite the rough correlation between the serum levels and the size of the infarct.

The following typical example of an acute transmural myocardial infarction studied with serial transaminase determinations is summarized graphically in figure 1.

The patient, H. S., a 52-year-old man without a previous history of cardiovascular disease, was admitted to the hospital on April 13, 1955 following the sudden onset of oppressive substernal pain and shortness of breath which awakened him from sleep and continued until relieved by opiates. Upon admission the pulse was 88, there were occasional premature ventricular contractions and gallop rhythm, and the blood pressure was 115/80. A few moist rales were heard at the left base, and there was 1 plus pretibial edema. The patient was digitalized soon after admission. On the fourth hospital day the blood pressure dropped to 92/60 and vasopressor drugs were administered. The subsequent course was uncomplicated, and the patient was discharged on the thirty-first hospital day.

The transaminase assay is also useful in detecting extension of an acute myocardial infarction which often is not recorded in the electrocardiogram. Extension is characterized by the appearance of a secondary rise in S-GOT at the time of the recurrence of symptoms.

A few patients have had an elevated S-GOT in the presence of a normal electrocardiogram. As will be discussed below an extra cardiac cause was present in some instances. In others typical angina pectoris has been noted. Whether this is due to small areas of electrocardiographically silent myocardial necrosis or other undetermined causes is unknown at present. Suffice it to say that necrosis of as little as 1 Gm. of myocardium was sufficient to elevate serum transaminase levels in the experimental animal.[6]

## Coronary Insufficiency

In the patient with sustained, severe, crushing substernal pain in whom the electrocardiogram shows only ST and T wave changes serial S-GOT determinations are of considerable value. Twenty-five per cent of such patients have shown an elevated S-GOT averaging about 100 units per ml. The peak occurs at 30 hours with return to normal 60 hours after the onset of symptoms. This type of coronary heart disease is usually designated as "coronary insufficiency," and much has been written about the presence or absence of associated damage to the myocardium. In an experimental study in rats, Merrill and associates[7] showed that transaminase decreased in the myocardium and increased in the serum only when anoxia was severe enough to cause necrosis of myocardial tissue. With less severe hypoxia the enzyme was decreased in the myocardium but not elevated in the serum. It would appear, then, that only in the presence of marked "coronary insufficiency" and anoxia will there be myocardial necrosis and an elevated S-GOT. The only significant electrocardiographic change in "coronary insufficiency" with myocardial

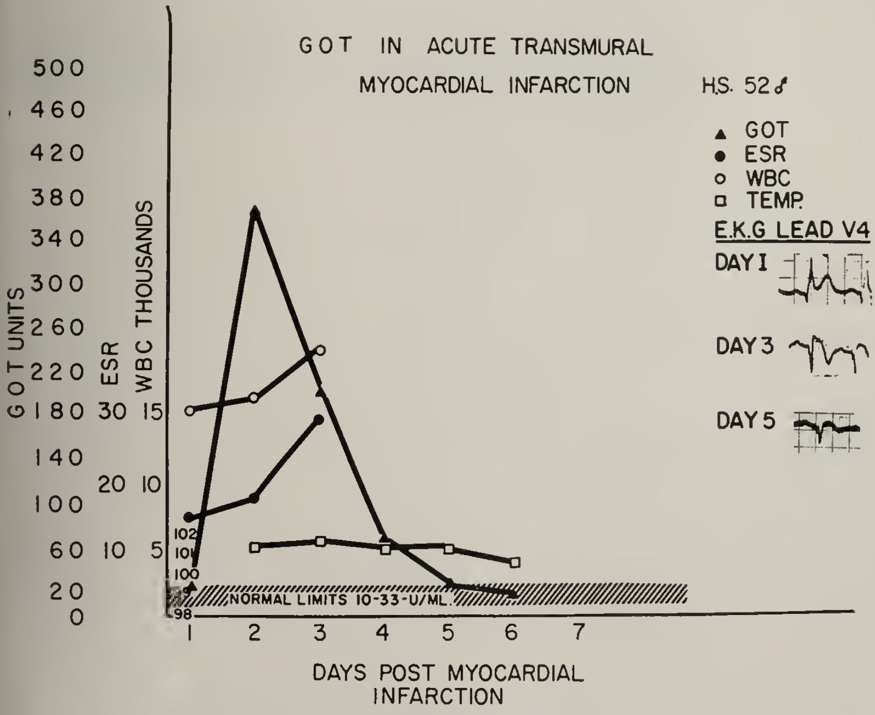

Fig. 1. Results in a typical case of transmural myocardial infarction.

necrosis as observed in this study was depression of the J junction of the S-T segment 2 or more mm. in the precordial leads, i.e., the so-called subendocardial infarction pattern. In every instance of suspected infarction in which this pattern was seen S-GOT was elevated.

A case representative of the "coronary insufficiency" group follows, with serial transaminase determinations as shown in figure 2.

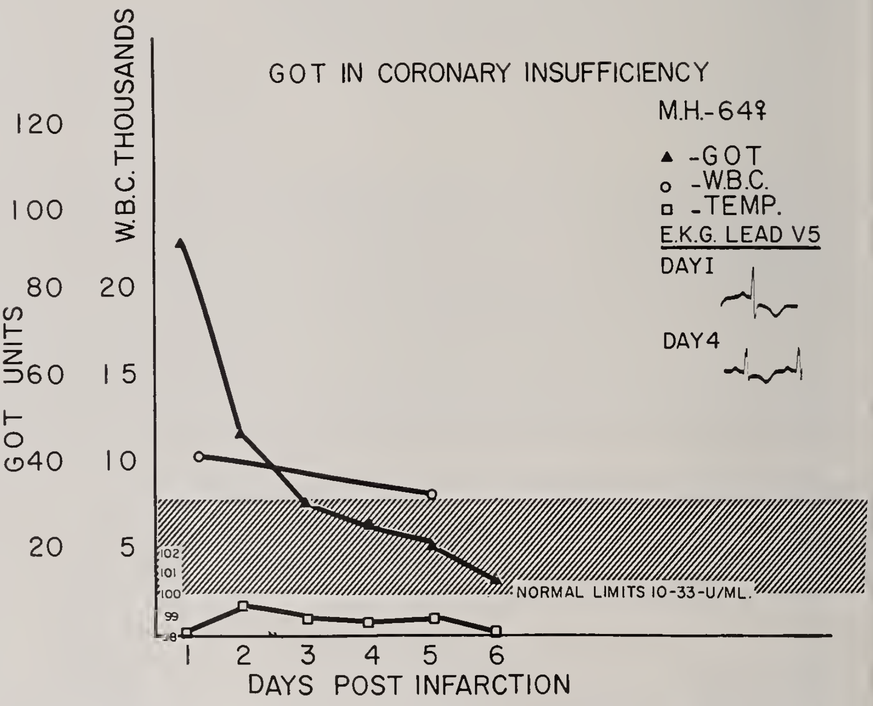

Fig. 2. Results in a case of coronary insufficiency showing highly significant elevation of serum "GOT" in the absence of definite electrocardiographic evidence of infarction.

M. H., a 64-year-old woman with a history of occasional angina pectoris during the previous year, was admitted to the hospital because of a severe squeezing anterior chest pain lasting 1 hour. During the week prior to admission there had been more frequent bouts of angina. On admission the blood pressure was 135/85, and the pulse was 80 and regular. Fine, moist rales were present at both lung bases. The electrocardiogram, which was normal a year before the present illness, showed ST and T wave changes of ischemia in leads I, AVL and $V_4$ through $V_6$. On admission the S-GOT was 96 units per ml., returning to normal by the third day. On the fourth hospital day the blood pressure dropped to 106/50, and on the fifth hospital day the sedimentation rate was 46 mm./hr. Six months later the electrocardiogram showed a marked reduction of R wave in lead IV.

On several occasions we have seen deeply coved inverted T waves in patients suspected of having myocardial infarction in whom the S-GOT remained consistently normal. Necropsy studies on 3 such patients failed to reveal the presence of myocardial infarction. Hence, we have come to regard ST and T wave changes in the electrocardiogram in patients with clinical coronary insufficiency as nonspecific, except for the subendocardial infarction pattern.

## Masking Electrocardiograms

Another important area for the application of this test is in those patients in whom the electrocardiogram presents with a masking pattern such as left bundle-branch block, pericarditis, Wolf-Parkinson-White syndrome, or previous infarction. In such instances the occurrence of new heart-muscle damage may be hidden or masked by the previous abnormality in the electrocardiogram.

Illustrative of this group is the following case report, with serial transaminase determinations as shown in figure 3:

D. H., a 68-year-old male, was admitted on February 10, 1955 because of dull anterior chest pain of 4 hours' duration associated with dyspnea, weakness, vomiting and cold clammy skin. On admission the blood pressure was 96/82 and the pulse rate 84, and there were frequent premature ventricular contractions. The initial electrocardiogram was interpreted as right bundle-branch block with ST changes indicative of an acute myocardial process. In an electrocardiogram 7 hours later the right bundle-branch block and ST changes had disappeared and there were only occasional premature ventricular contractions. All subsequent electrocardiograms showed only left bundle-branch block. The S-GOT curve was characteristic of transmural myocardial infarction. In view of the known difficulty in reading a myocardial infarction in the presence of left bundle-branch block the practical value of the enzyme test is obvious.

Other areas of usefulness include the problem of myocardial infarction of undetermined age which can in many instances be resolved by transaminase determinations. Likewise the test is of value in differentiating acute pericarditis from myocardial infarction, since in the former condition the enzyme content of the serum is normal.

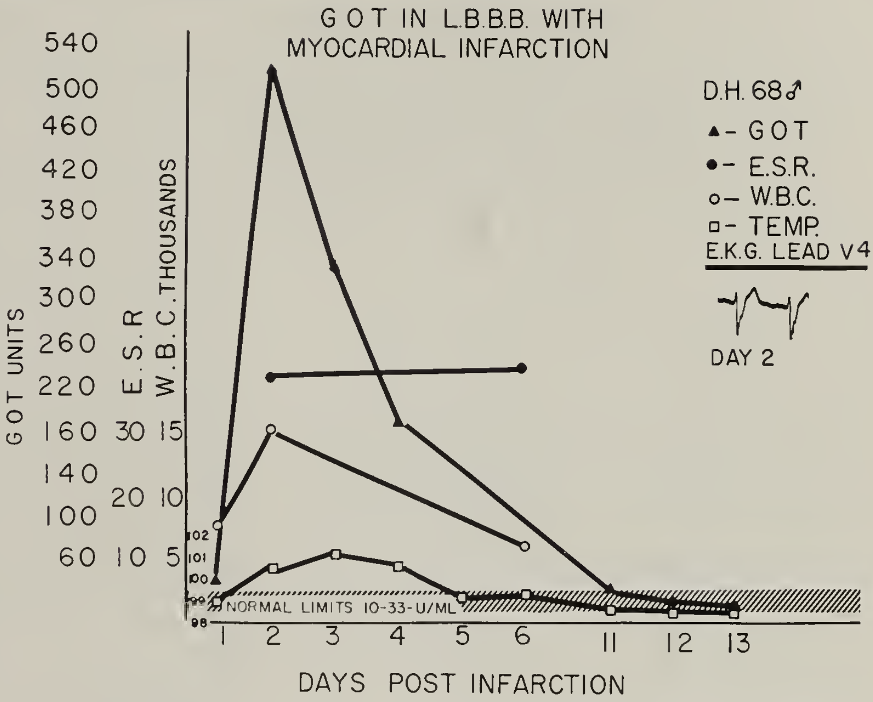

FIG. 3. Results in a patient with left bundle-branch block showing a serum "GOT" curve like that observed in cases of transmural myocardial infarction.

### AUTOPSY CORRELATION

In every case in which fresh necrosis was found post mortem an elevated S-GOT has been observed. In 1 instance S-GOT was elevated in the absence of acute myocardial infarction, and the patient was found to have Fiedler's myocarditis with diffuse rather than localized myocardial necrosis. Table 1 summarizes the autopsy experience in this study and emphasizes that there was complete agreement between the S-GOT diagnosis and the pathologic diagnosis of myocardial necrosis.

TABLE 1
*Summary of Autopsy Correlation*

| Myocardial Necrosis at Autopsy | No. Cases | Clinical ECG Appraisal | | | "GOT" Results | | |
|---|---|---|---|---|---|---|---|
| | | Positive | Negative | % Correlation | Positive | Negative | % Correlation |
| Present | 13 | 11 | 2 | 85 | 13 | 0 | 100 |
| Absent | 5* | 2 | 3 | 60 | 0 | 5 | 100 |

* In one of these cases both clinical ECG appraisal and "GOT diagnosis" were negative, but at autopsy 4 months later several old infarcted areas were found that could not be dated.

### EXTRA CARDIAC CAUSES OF ELEVATION IN S-GOT

Table 2 summarizes our experience with this test in a wide variety of conditions. We have found acute hepatocellular damage and acute pulmonary infarction to be the most common noncardiac causes of elevated serum transaminase. Acute hepatocellular necrosis raises S-GOT proportionately to the extent of liver damage. When the process is massive and diffuse, as in carbon tetrachloride intoxication, astronomical elevations of S-GOT may be seen. In active cirrhosis a low plateau type curve is found, except when hepatic insufficiency is present, in which case the S-GOT often climbs rapidly and has been of prognostic value. In infectious hepatitis a curve somewhat intermediate between these two is frequently observed. Since active hepatocellular damage must be present before transaminase is elevated S-GOT is usually within normal limits in early extrahepatic obstructive jaundice.

TABLE 2
*Transaminase Values in Other Diseases*

| "GOT" Elevated in: | "GOT" Normal in: |
|---|---|
| 1. Myocarditis, acute | 1. Pericarditis |
| 2. Active hepatocellular damage | 2. Angina pectoris or coronary insufficiency |
| 3. Acute pancreatitis | 3. Infectious diseases |
| 4. Pulmonary infarction | 4. Rheumatic fever without carditis |
| 5. Hemolytic crisis | 5. Acute cholecystitis |
| 6. Extensive crushing injuries or burns | 6. Peptic ulcer, perforated or bleeding |
| 7. Surgery | 7. Arthritis, rheumatoid and hypertrophic |
| 8. Cerebral infarction | |
| 9. Dermatomyositis | |

In approximately one-half of the patients seen with well-defined pulmonary embolization there is a late minimal rise of serum transaminase. This occurs on about the fourth to sixth day after embolization and reaches peak levels of 60 to 70 units per ml. We suspect this rise is due to the development of pulmonary infarction with liberation of the enzyme from both necrotic pulmonary tissue and hemolyzed red blood cells in the presence of impaired liver function, interfering with removal of liberated enzyme from the serum.

In several instances of acute pancreatitis serum transaminase levels have been distinctly elevated. In others, normal values were observed. More work and further observations on this aspect are required before any conclusions can be drawn.

In evaluating possible coronary occlusion in postoperative patients a word of caution is necessary. Since the enzyme is elevated by the muscular injury of a surgical procedure for as long as 3 to 4 days, one cannot rely on the test until approximately the fifth postoperative day.

## SUMMARY

The spectrophotometric assay of S-GOT offers an additional method for the detection of acute myocardial necrosis.

In transmural myocardial infarction peak values, averaging 160 units per ml., are reached on the first day and return to normal by the fifth day after the onset of symptoms.

In 25 per cent of patients with only ST and T wave changes in the electrocardiogram following severe anterior chest pain the S-GOT reached peak values averaging 100 units per ml. The peak level appeared on the average 30 hours after the onset of symptoms and returned to normal by 60 hours.

The diagnostic value of the transaminase test in patients in whom electrocardiographic changes mask an acute myocardial infarction is emphasized.

A correlation of 100 per cent is recorded for the "S-GOT diagnosis" and autopsy findings in 18 cases.

Extracardiac causes of S-GOT elevations include hepatocellular damage and acute pulmonary infarction.

N. B. This work was supported in part by a research grant-in-aid of the Washington Heart Association. Acknowledgment is made to Miss Helen Caywood for her technical assistance.

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(*Continued on page 59*)

# THE RADIATION THERAPY OF HUMAN CANCER WITH ACCELERATED ATOMIC PARTICLES[*][†]

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THE CANCER DESTRUCTIVE and other biologic effects of radiation therapy are the results of processes by which the energy of the radiations is transferred to the biologic material through, largely, the intermediary of interactions with atomic particles resulting in ionization[‡] and excitation[§] of them. Chemical reactions and biologic effects follow this initial energy transfer process. Cells and tissues do not distinguish, in a qualitative manner, the radiations producing these direct ionization and excitation effects. The prime technical objective in the treatment of human cancer by ionizing radiations is to effect, therefore, a maximum of ionization and excitation at the site of interest, the cancer cell, with a minimum of ionization and excitation elsewhere. Multiple fixed-beam, cross-fire, and rotational million or multimillion volt X-ray or cobalt-60 therapy technics and radioisotope localization (notably radioactive iodine) serve to concentrate the ionization and excitation phenomena at the site of interest. Such technics represent the most advanced ones presently available.

The radiations capable of producing such interactions are, principally, photons (X-rays and gamma rays; of the latter, radium and cobalt-60 gamma rays being of principal use in contemporary radiologic practice) and energetic atomic particles, either energized through naturally occurring or induced radioactivity or accelerated by external physical means. Such radiations may be characterized by mass and charge, as:

| Radiation | Mass (relative) | Charge |
|---|---|---|
| Photons: | | |
| X-rays | 0 | |
| gamma rays | 0 | |
| Atomic particles: | | |
| electron | 1 | − |
| proton | 1,836 | + |
| neutron | 1,839 | 0 |
| deuteron | 3,675 | + |
| alpha particle | 7,297 | ++ |

Beams of accelerated particles may be further characterized by range, ionization density, and homogeneity. The range, or penetration, of these radiations is related to their energy and mass, and the greater their mass the greater the energy necessary to give them comparable range. In relation to the human body the range of the X- and gamma-radiations is practically unlimited at energies of a million or more volts, while the heavier atomic particles must be accelerated to energies of 100 or more million volts in order to give them effective range or penetration. The difficulty inherent in obtaining such energies has been a limiting factor in the application of such radiations to human cancer therapy. Some of the characteristics of these radiations are demonstrated in figure 1. This plate shows the relative ionization density or relative dose along the beam as it traverses tissue, and wide differences, all of which have important clinical implications, are to be noted. The curves are "normalized" to show the doses at a depth of 10 cm. as 100 per cent in order to emphasize the wide differences which obtain in skin and depth doses.

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[*] From the Radiation Branch, National Cancer Institute, National Institutes of Health, Public Health Service, Department of Health, Education and Welfare.

[†] Presented at a meeting of the Cancer Section of the Baltimore County Medical Society at the Clinical Center of the National Institutes of Health, May 9, 1956, in Bethesda, Maryland.

[‡] The removal of an electron from its orbital shell.

[§] The raising of an orbital electron to a higher energy state.

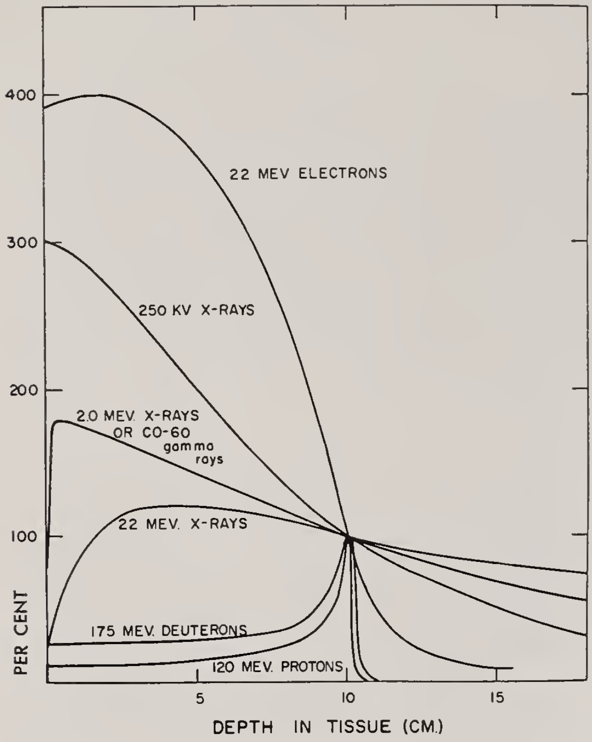

FIG. 1. Relative depth doses for various photon and accelerated ionizing particle beams. "Normalized" to 100 per cent at 10 cm. depth of tissue.

While the interactions of photons (X- or gamma rays) occur throughout a very wide zone their ionization density is small compared with that of the electrons energized by them, and it is these secondary electrons which account, by far, for the biologic effects produced. To proceed directly to the production of biologic effects by an electron beam without the intermediary of X- or gamma-quantum energy requires, however, the development of apparatus which will accelerate these particles to energies of 1 or more million volts, and at 1 million volts their penetration is still only a few millimeters. The Van de Graaff electron accelerator for the production of 2 million volt X-rays can be provided with a retractable target so that the electron stream can be removed and be made, by suitable modification, a clinically useful beam of electrons of about 1 million volts' energy. Such an electron beam has the characteristics of range (maximum depth of penetration) and ionization density (relative dose) as shown in figure 2. Obviously such a beam could be of use only in the treatment of very superficial cancers, but under such circumstances it would provide the means of radiating large surface neoplasms or even the entire skin surface without producing any radiation effects in the bone marrow or other critical internal organs. The infiltrative type of mycosis fungoides limited to the skin is appropriate for such therapy, and the following case abstract describes some of the effects of such therapy.

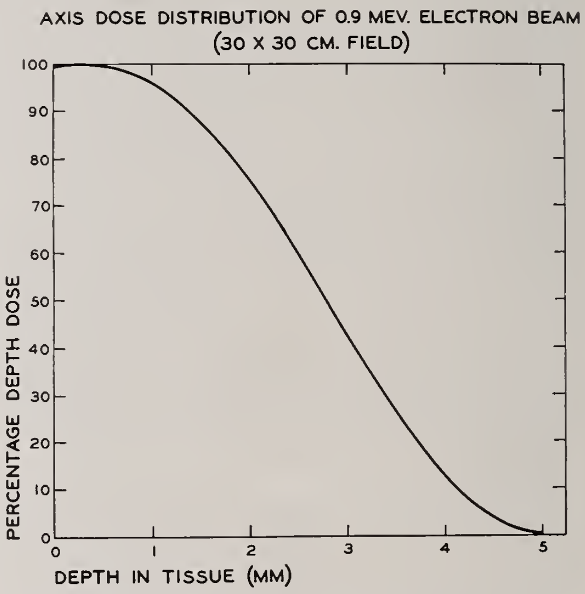

FIG. 2. Depth dose curve of electron beam used in the treatment of the case reported.

## ILLUSTRATIVE CASE

E. H., WF-51, C.C. (NIH) No. 00-10-43. Diagnosis: Mycosis fungoides.

This patient was accepted for electron-beam therapy because the disease involved the entire skin surface;

many lesions were exudative, and some were ulcerated. There was intense itching. A course of nitrogen mustard therapy had recently been given without effect. Electron-beam therapy was also given in anticipation of effecting some improvement in the condition of the skin to allow a combined abdominoperineal resection to be performed for carcinoma at or near the anorectal juncture which had appeared coincidentally.

Treatment was given with an electron beam measuring 30 cm. square and with an initial energy of 1.5 mev but degraded through scattering to an energy less than this. The entire skin surface was treated at each sitting by moving the patient in respect to the fixed beam. The eyes were protected by ¾-inch plywood blocks. The distribution of the electrons in tissue is shown in figure 2, and it is apparent from this figure that the maximum depth of penetration did not exceed 5 mm., and at this depth the radiation effect is very slight. Doses are in terms of the ionization integrated through a layer of 5 mm. thickness, and the maximum dose, near the surface, is approximately 1.8 times this integrated dose.

Applications of the electron beam to the total skin surface were made as follows:

| Date | Integrated Dose |
|---|---|
| 4/25/55 | 438 rep* |
| 4/26/55 | 438 rep |
| 9/1/55 | 200 rep |
| 9/8/55 | 200 rep |
| 9/15/55 | 200 rep |
| 9/26/55 | 200 rep |
| 9/29/55 | 200 rep |
| 10/7/55 | 200 rep |

* Abbreviation for roentgen equivalent physical and defined as a unit of absorbed dose equal to 93 ergs per gram (roughly equivalent to the roentgen [r]).

Recovery of the skin was good after the treatments given on April 25 and 26, 1955, and a combined abdominoperineal resection and transverse colostomy were then performed. Subsequent to this erythema and scaling of skin recurred, and skin biopsies showed reactivation of the mycosis fungoides. The patient was retreated according to the schedule, beginning September 1, 1955. Deep tanning of the skin occurred following this treatment, and this persisted for months. The appearance of the patient at the end of this treatment series is shown in figure 3. Substantial relief of symptoms and general improvement in the appearance and character of the skin resulted and the patient stated that she had not experienced such a sense of well-being for many years. The exposure of the total skin surface to the doses indicated was accomplished without any effects whatever on the blood-forming organs or other tissues. The patient had a satisfactory remission lasting for 1 year, but she required on several occasions a small amount of treatment to limited zones of patchy recurrence. At this writing, a year later, she is experiencing a generalized recurrence, and total skin-surface electron-beam therapy is to be started again. There is no evidence of radiation damage to the skin, eyes, or other superficial parts.

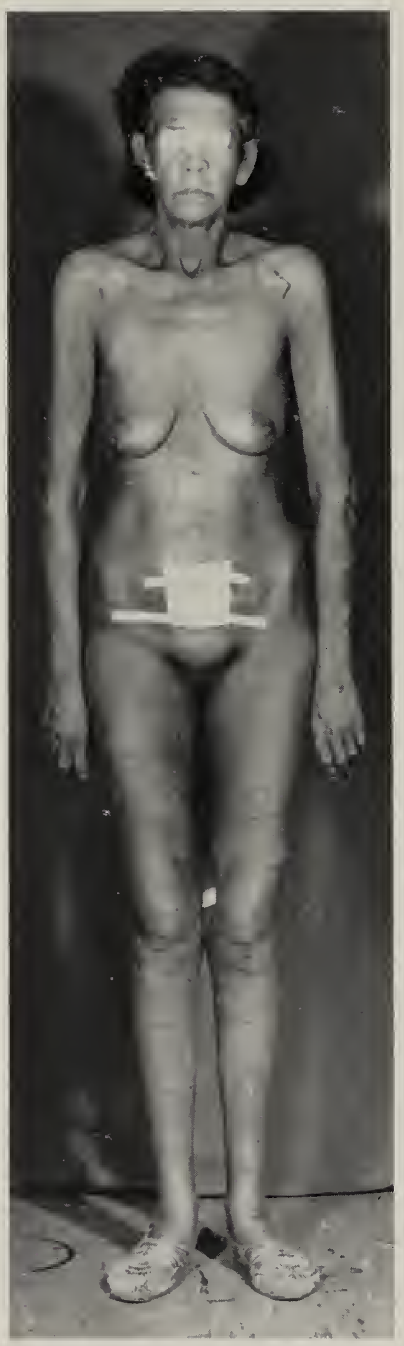

FIG. 3. Case of mycosis fungoides after completion of electron beam therapy (see text).

Protons, having a mass some 1,800 times that of the electron, require higher energies to "drive" them to significant depths in tissue. When such energy is available—and this is in the 100 to 150 million-volt range—the distribution of the ionization is very interesting, as shown in figure 1. This shows that the energy of the photons is dissipated in a very narrow zone at a relatively great depth. The very low relative ionization at the surface of incidence compared with the intense ionization at the site of interest, i.e., at deep tumor site, would seem at first glance to suggest that this would be a very useful beam for treating deep-seated neoplasms, but further consideration will show that it is not apparent as to how such a proton beam could be effectively employed in clinical radiation therapy because the zone of this intense ionization at a depth is very narrow. If one would move the site of interest either forward or backward, as could be accomplished on an oscillating treatment chair, then for each thin zone of maximum ionization achieved another increment of incident ionization is added at the surface, and very soon the latter would exceed the former and the initial advantage would be lost. Tobias[1] has done some preliminary work on the radiation destruction of the human pituitary gland with a proton beam in cases of advanced cancer in which the "hypophysectomizing" effects of the radiation were being studied.

The neutron is a special case. The neutron has no charge, and it cannot ionize or excite other atoms directly. Fast neutrons give up their energy through interactions with protons, and it is the secondary interactions caused by these latter nuclear particles which may ultimately result in multiple ionization processes. Stone[2] treated a series of cancer patients with a neutron beam from 1938 to 1943 and reported his long-term results in 1948. There were many severe and incapacitating late reactions. Problems of dosimetry were not as well understood at the time this work was performed as they are now, and the treatment of cancer with neutron beams should be reëxplored.

The behavior of an energetic deuteron beam is also of interest, since, while the ratio of the maximum ionization to the incident ionization is smaller than that for protons, the zone of maximum ionization is also broader (figure 1), and this suggests that therapeutic application may be feasible. Deuteron beam radiation has not yet been applied to the treatment of human cancer.

In conclusion, beams of accelerated atomic particles can serve, either directly or indirectly, as useful agents for the transfer of energy through processes of ionization and excitation in the treatment of human neoplasms, and it would appear from a study of the physical characteristics of these accelerated atomic particle beams that there might be an optimal field of usefulness for each. This is demonstrated in the case of the electron beam by presentation of a case of mycosis fungoides effectively treated with such a beam and with radiation effects limited to the skin only. The medical potentiality of other beams is briefly considered.

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# THE USE OF IODIDES IN ASTHMA

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THE USE OF IODIDES in asthma has been well established for many years,[1-6] yet perhaps because familiarity breeds contempt, it is often omitted or at least not used to the optimum degree of effectiveness in the management of severe cases of asthma, bronchitis, or emphysema.[3] It is not uncommon to review a difficult case of asthma and find that after all of the new "wonder drugs" have been tried and have been found wanting the tide can be turned by the proper use of iodides.

Many of our modern textbooks merely state "iodides are useful as expectorants in asthma" and then go on to other topics. It is important not only to use the iodides, but to know how to use them properly. Many a patient is handed a prescription for a nasty-tasting medicine containing iodides and often as not will discard the medicine before it can do any good, merely because the patient was not properly forewarned and instructed. Also probably the physician did not take the trouble to mitigate the offensive taste as much as possible.

Although there are many different forms of this drug available, a thorough knowledge of relatively few of the principal ones will enable the physician to use them successfully. I like to classify the iodides basically into 3 broad groups. In the first group we have the inorganic iodides, of which saturated solution of potassium iodide and syrup of hydriodic acid are representative. In the second group are the organic iodides. Here such preparations as Organidin or Amends Solution may be mentioned. And finally, in the third group are mixtures of iodides with other therapeutic drugs, of which Quadrinal and Mudrane are good examples. The physician with the knowledge and experience in the use of the iodides of each group is in a good position to obtain the maximum benefit from such medication.

There are many reported and claimed reasons for the superiority of each of the above groups over the others, but actually from a practical standpoint, not one of them is really cogent. The inorganic iodides, since they have the major advantage of exerting the most rapid effect and of being inexpensive and readily available in all drugstores, should be the main ones to be used. Their particular disadvantage is their bad taste and their greater irritating effect on the gastrointestinal tract. The organic iodides, on the other hand, are less irritating and generally do not have such an offensive taste. However, their rate of absorption is slower and they are less readily available and more expensive. Mixtures of other drugs with iodides simplify therapy and allow the administration of the desired drugs in a single dose, often with a more rapid action. Also, because they combine the drugs needed in 1 prescription they are economical.

Adequate patient instruction is a vital part of the proper use of any iodide preparation. In the first place, I like to warn a new patient that the medicine will have both a bad taste and a bad after-taste. Thus prepared in advance, the patient will be less apt to discard the medicine. Second, iodides in any form should be taken after meals and well diluted with milk or juices in order to minimize gastric irritation. Third, and most important of all, the initial dosage should be quite small in order to accustom the patient to the drug. One can then gradually increase the dosage to the point of maximum toleration so as to obtain the best therapeutic results. I always instruct the patient that the action of this drug is quite slow and that he should continue the dosage regularly for long periods of time until instructed to stop. Finally, the patient should be told to report any side-effects or unpleasant symptoms to his physician in order that he can decide whether or not the drug is to be stopped. Ordinarily, I do not think it wise, for psychologic reasons, to discuss with the patient beforehand all the possible side-effects which may occur. Such a discussion might cause the patient to expect disagreeable symptoms and influence him to feel decidedly worse, even with some more or less insignificant side-effects.

The undesirable effects of all the various iodide preparations are essentially the same, with perhaps minimal variations. The truly major reactions to iodides occur with all the iodides whatever their form. The minor side-effects, which I feel are part of the physiologic action of the iodides, consist, in part, of erythema of the face and chest, red throat, tongue and mouth, mild gastric irritation, slight rhinitis, mild sore throat and brassy taste in the mouth. These effects usually wear off if the dose is continued at a lower dosage. The skin in many cases will show a minimal acneform eruption, which, if not progressive, is no contraindication to the continued use of the drug.

One should question carefully every patient, particularly allergic and asthmatic patients, about any previous drug reactions before prescribing any medication. He should ask specifically about aspirin, penicillin, codeine and iodides, since these are used so often, and any proven drug-reactor should have the name of the trouble-making drugs printed in red on the front of the patient's chart to prevent the doctor from forgetting about this at a later date. The main contraindication to the iodides is a true hypersensitivity, which fortunately is not too common. Such hypersensitivity is manifested by fever, malaise, pain at the angle of the jaw due to marked swelling of the salivary glands, and severe acneform or even urticarial and purpuric types of rashes. These major reactions are merely a greater degree of the mild transient reactions listed above. A possible old tuberculous lesion need not be a contraindication to the use of iodides, should the latter be indicated. Others, for example Wilson,[7] are of the same opinion. Occasionally, in patients who have been on iodides for a long time, there are signs of beginning myxedema and goiter. It appears that an excess as well as a lack of iodine will result in a diminishing production of thyroid hormones. In some individuals prolonged iodide therapy may have an antithyroid action similar to that of thiouracil. This has been reported in the literature, and this rare possibility should be considered in the case of prolonged use of iodides in young individuals.[8] Over the course of years, however, I have seen very few of these cases despite regular and prolonged use of the iodides in chronic cases. The 2 or 3 cases which were seen have all occurred in younger individuals and have responded readily within a few months to cessation of the use of iodide.

Below I have listed a group of 5 prescriptions illustrating the use of iodides in various forms, and with this minimum number of variations one can handle very adequately the average therapeutic problems involving iodide therapy.

℞ Saturated solution of potassium iodide 2 oz.
Sig: Start with 5 drops q.i.d., p.c.
Gradually increase to 20 drops q.i.d.

This should be the usual way to use the iodides.

℞ Syrup of hydriodic acid 4 oz.
Sig: ½ or 1 teaspoon every 4 hours.

This is a good prescription for children. It could be mixed 50-50 with any good-tasting cough syrup mixture.

℞ Hycodan Bitartrate 0.10 Gm.
Saturated solution of potassium iodide 10 Gm.
Phenergan Expectorant q.s.a.d. 120 Gm.
Sig: 1 teaspoon every 4 hours for cough.

This is a good example of mixing the iodides in cough mixtures for special effects as needed. The above prescription contains 5 grains of potassium iodide per dose, a narcotic antitussive and an antihistamine. The amounts of each drug can be varied as desired.

℞ Organidin solution (Wampole Chemical Co.) 1 oz.
Sig: Increase to 20 drops q.i.d.

This is an example of a good organic iodide preparation which is more readily tolerated than solution of potassium iodide.

℞ Quadrinal tablets (Bilhuber-Knoll Corp.) no. 30
Sig: ½ or 1 tablet every 3 to 4 hours for asthma.

This tablet contains ephedrine hydrochloride, grain ⅜; phenobarbital, grain ⅜; Phyllicin (theophylline-calcium salicylate), grains 2; potassium iodide, grains 5. This is a most convenient combination of 4 of the most useful drugs in asthma. The combination is quite stable and the tablet is easily broken into ½ or ¼ tablet for use in children and even infants. The rapid effect of the ephedrine and theophylline is combined with the slower action of the potassium iodide for more complete relief in asthma, bronchitis and emphysema.

Finally, I should like to stress the need for proper hydration of the patient in order to obtain maximum expectorant effect from iodides. The severe asthmatic is often too sick to care to eat or drink and is often dehydrated. If we stress the need for hot, sweetened drinks as a part of his medication, the patient will coöperate. I like to tell the patient to take 1 full glass of hot, sweetened liquid such as tea or lemonade every waking hour. The heat of the liquid acts as a reflex bronchodilator, and the water along with the iodides acts as a liquefier of the viscid mucus; the sugar or honey in the drink acts as a ready source of energy without distending the stomach and adding to the patient's dyspnea. Thus I give to you iodides and hot liquids—the best friends an asthmatic ever had!

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# GASTROSCOPY—AN UNAPPRECIATED DIAGNOSTIC AID

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DURING THE PAST few years I have been impressed by the infrequency with which the procedure of gastroscopy is used as a diagnostic adjunct. Except in the university gastroenterology clinics, the average clinician depends upon a history, physical examination, gastric analysis, and X-ray examination of the stomach for gastric diagnosis. Without decrying the value of such proven methods, it is nevertheless apparent with a little reflection that these well-known approaches fail to make a definitive diagnosis in a small but appreciable percentage of cases. Schindler[1] attests to the fact that gastroscopy may be very helpful in such situations when he says: "There exist, in addition to many rare conditions, 4 major diseases of the stomach, namely, carcinoma, chronic ulcer, gastritis, and psychogenic organ neurosis. The differentiation between these 4 conditions is not possible merely by taking the case history, a gastric analysis, and other tests, but only by the combination of X-ray and gastroscopy." Therefore, it seems pertinent to consider some of the reasons why gastroscopy is not more widely employed, and secondly, to outline certain clinical circumstances where gastroscopy may yield critical information.

## Reasons Why Gastroscopy Is Neglected

There appear to be 4 primary reasons why gastroscopy is overlooked:

I. Lack of acquaintance with the procedure is undoubtedly a factor. Many physicians think that gastroscopy is very painful and is done only in the hospital operating room suite, and that it is attendant with few real successes in visualizing those parts of the stomach most often affected.

Actually, in experienced hands the scoping is accomplished with a very minimum of discomfort. It takes 10 minutes or less for a quick but careful survey of the gastric mucosa. Preparation including spraying of the pharynx and upper esophagus with Pontocaine, plus intramuscular morphine and atropine with Carbrital for allaying anxiety, insures a calm, coöperative patient. The accomplishment of gastroscopy requires only a small room, a sturdy table and an attendant to support and steady the patient's head while the scope is being passed. Use of an operating room is nice but is hardly necessary.

II. The percentage of diagnostic successes is dependent upon the care with which the gastroscopist estimates the indications for gastroscopy. Obviously, the visualization of gastric membranes through a system of lenses does not allow one to differentiate between a benign and a malignant gastric ulcer when the surgeon himself with the operative specimen in hand cannot do so. Such differentials are for the pathologist alone. Suffice it to say, however, that Benedict and others are constantly working to improve already existing gastroscopic instruments capable of taking biopsy specimens of gastric membrane as they are visualized. In addition, there are now on the market gastroscopic instruments capable of allowing the taking of biopsy specimens of multiple areas of the gastric membrane by suction without direct visualization. In my opinion, these scopes are still a bit cumbersome, but the technical "know-how" of medical instrument-makers will undoubtedly overcome these obstacles.

III. One of the repeated objections to gastroscopy has been the fact that only certain portions of the stomach can be visualized, that there are certain important gastric blind spots where hidden lesions may lurk. These blind spots have hitherto been the proximal cardia, the most inferior portion of the greater curvature at the blind end of the scope, and, more importantly, a sizable portion of the distal third of the greater curvature beyond the so-called angulus of the stomach. Obturators encased within the shaft of the scope can now effect considerable bending of the instrument within the stomach which, together with varied positioning of the patient, allows for visualization of an increasingly wider intragastric area.

IV. Finally, the employment of gastroscopy by hospital residents, interns and by those inexpert in its use has resulted in a lack of widespread prestige for the instrument. Anyone with normal mechanical ability can pass a gastroscope and for some reason young hospital staff physicians find it difficult to resist the novelty of gazing into the stomach. The trick, of course, is to evaluate what one sees. A dynamic gastric membrane is ever changing character due to changes in circulation, emotions and respiration. Inflation of the stomach to varying degrees by introduced air, in addition to the encountering of a variety of types and shapes of human stomach, results in problems of orientation. Thus, the human stomach presents a confusing set of circumstances to the inexperienced observer. It is not surprising that errors of inexperience have discouraged clinicians in the value of gastroscopy.

### Situations in Which Gastroscopy Is of Significant Help

I. The diagnosis of gastritis is a circumstance wherein the gastroscope has no peer. One often reads an X-ray report which suggests that the gastric mucous membrane appears hypertrophied or is suggestive of hypertrophic gastritis. Most X-ray men will now admit that such diagnoses are presumptive and have been proven by subsequent surgical follow-up to be as often incorrect as otherwise. The gastric mucous membrane is subject to neuromuscular contractions. X-ray films represent still silhouettes, whereas the gastroscope reveals the membrane *en face*.

Likewise, the clinical diagnosis of gastritis on symptoms alone, though often made, is, according to Bockus, surprisingly seldom substantiated. This is particularly true where hematemesis, when there is a history of alcoholism, is the diagnostic criterion. Schindler's book[2] on gastritis includes innumerable case histories in which gastroscopy was the final diagnostic criterion, and his classification of gastritis is as follows:

A. Acute gastritis
  1. Acute simple exogenous gastritis
  2. Acute corrosive gastritis
  3. Acute hematogenous gastritis
  4. Acute phlegmonous gastritis

B. Chronic gastritis
  1. Idiopathic chronic gastritis
    (a) Chronic superficial atrophic gastritis
      (1) Chronic superficial gastritis
      (2) Chronic atrophic gastritis
    (b) Chronic hypertrophic gastritis
  2. Chronic gastritis accompanying other gastric pathology
    (a) Chronic gastritis with gastric tumors
    (b) Chronic gastritis with gastroduodenal ulcer
    (c) Chronic gastritis in the postoperative stomach.

II. Clarification of questionable X-ray diagnoses presents an opportunity for gastroscopic aid. Every clinician has had occasion to read an X-ray report suggesting that the findings, while not diagnostic of a specific lesion, are nevertheless abnormal, and the roentgenologist himself will often suggest that gastroscopy be done. An interesting case demonstrating such an occasion is as follows:

**Case 1.** R. T., a 32-year-old white man, having been found by X-ray examination to have a duodenal ulcer, was placed on anti-ulcer therapy which included an aluminum hydroxide compound. X-ray examination 6 weeks later disclosed to everyone's amazement a group of smooth, rounded, filling defects in the gastric antrum resembling gastric polyps. Gastroscopy disclosed the true nature of these defects to be freely movable, white curd-like masses evidently containing aluminum hydroxide or related chemical salts.

III. The determination of the stomach as the site of gastrointestinal bleeding is a function of gastroscopy little appreciated by the general profession. If hematemesis is not present in an individual in whom melena and other signs are indicative of upper gastrointestinal bleeding, the clinician thinks of duodenal ulcer, and is most often correct. However, it is often the case that the roentgenologist reports a negative stomach and duodenum, and the melena and signs of appreciable blood loss continue unabated. This situation puts the clinician on the spot, as the following case report shows:

**Case 2.** M. K., a 45-year-old white man, had had periodic episodes of pain beneath the left costal margin followed within a few days each time by tarry stools and a feeling of weakness. Upper gastrointestinal X-ray examination on 3 different occasions gave completely negative results. Finally, on the third occasion he was gastroscoped, and a group of superficial erosions were noted high in the gastric corpus. From these superficial ulcerations, typical of superficial erosive gastritis, blood was seen to be oozing.

Gastroscopy should be employed to rule out a gastric source in all cases of gastrointestinal bleeding in which X-ray diagnosis is not definitive.

IV. When used as a follow-up procedure for gastric ulcers being treated medically, gastroscopy can be very helpful, though one must truthfully state that it is impossible to differentiate visually between benign and malignant ulcers. Nevertheless, it is comforting to the clinician to see the ulcer in question become smaller week by week and a healthy-looking gastric membrane eventually replace the ulcerated area. On the contrary, the failure of the ulcer to promptly heal (6 weeks) is a definite indication for resection. If the ulcer can be visualized, one does not have to depend entirely upon the shadows and silhouettes of X-ray films. The following case report is illustrative.

**Case 3.** W. S., a 52-year-old white man, had been bothered with stomach trouble for 1½ years. X-ray fiims showed a protrusion extending from the greater curvature and measuring 1 by 1 cm. The lesion was estimated to be located about 2 cm. from the pyloric ring. Gastroscopy was carried out, and a medium-sized ulcer on the greater curvature side was visualized adjacent to the pyloric ring. The ulcer crater was filled with a grey exudate, and its margins appeared smooth. One month later after excellent clinical response to medical management the patient was again gastroscoped. This time the ulcer was barely visible, and again the borders were entirely smooth without evidence of induration. X-ray films were confirmatory. To date the patient has done well clinically and by X-ray examination.

V. The visualization of stomal openings and marginal ulcer is possible with the gastroscope. Nausea, epigastric pain and burning after gastroenterostomy or subtotal resection pose a problem difficult of solution by X-ray examination in many cases. The cicatricial deformities present after such surgical procedures often present a very confusing X-ray picture. It is in such cases that gastroscopy with direct visualization will help differentiate between postoperative gastritis and actual marginal ulceration. It also gives a bird's-eye view of the adequacy or inadequacy of the anastomotic lumen. The following case presents a not infrequent problem.

**Case 4.** R. B., a 42-year-old white man who 2 years previously had had a subtotal gastrectomy came in with chief complaint of epigastric burning of 3 weeks' duration. Guaiac examinations of the stool were persistently 4 plus on a meat-free diet, although no gross melena was discernible. X-ray films were equivocal. The roentgenologist could not definitely spot an ulcer niche. Gastroscopy showed a marginal ulcer measuring approximately 1 cm. in diameter adjacent to an area of acute gastritis.

VI. Within the past few years Benedict in Boston and others have been taking biopsy specimens of gastric membrane through the use of small biopsy forceps which can be passed through the rubber sheath enclosing the gastroscopic instrument into the stomach. According to Benedict,[3] "Biopsy has proved useful in the diagnosis of lymphoma, carcinoma, and gastritis. Heretofore it has been impossible to differentiate lymphoma from severe gastritis. A gastroscopic biopsy that demonstrates lymphoma offers positive proof of the disease. A gastroscopy that does not demonstrate lymphoma may exclude lymphoma with reasonable certainty, because this growth is generally regarded as a diffuse process. In differentiating lymphoma from gastritis a gastroscopic biopsy is very important, lymphoma being a surgical problem and gastritis a medical one. The diagnosis of carcinoma of the stomach may be easy or difficult. In a difficult case a positive gastroscopic biopsy establishes the diagnosis beyond any question. A biopsy that does not reveal the presence of carcinoma, on the other hand, does not exclude the lesion, because carcinoma may be a localized process, and the specimen may have been taken from a noninvolved area near a carcinoma." I have used such an operating gastroscope and found it rather clumsy and uncertain in its present stage of development. It is difficult to be visually certain just when the biopsy forceps are in contact with the membrane to be examined. Also, the biopsy usually turns out to be extremely superficial. This is not to decry this most promising advance in gastroscopy. In the hands of men like Benedict the method will undoubtedly be developed until it will erase a major weakness in gastroscopy, that is, the inability to differentiate with certainty between benign and malignant lesions. Reference is again made to Benedict's articles on gastric biopsy and the interesting case reports contained therein.

VII. A variety of benign and malignant tumors can be visualized through the gastroscope, among them being polyps, sarcomas, lymphomas, myomas, leiomyomas and the combinations of these. In many cases an accurate idea may be had as to their origin and benignancy or malignancy. The following case is an interesting example:

**Case 5.** C. P., a 71-year-old white woman, was found to have a sausage-shaped mass in the epigastrium upon physical examination. X-ray films of the stomach showed a gastric polyp measuring 1 cm. in diameter and situated approximately 4 cm. from the pyloric ring. Gastroscopy was performed, and a large, fiery red polyp was seen "shivering" in the antral lumen and attached to the gastric membrane by a broad base. Near the base of this polyp were several sessile polyps resembling exaggerated mammillations seen in hypertrophic gastritis. These were more prominent on the surface of individual rugal folds. Surgical removal of the stomach showed 17 polyps varying in length, the largest of which was 2.6 cm. in diameter. Microscopic sections showed multiple adenomatous polyps of the stomach, none of which showed signs of malignancy at this time.

VIII. One indication for gastroscopy that is disregarded and yet may occasionally yield a brilliant answer is the clinical occasion when the patient has symptoms referable to the stomach such as chronic nausea, heartburn, anorexia, and so forth, in the presence of negative X-ray findings and with or without achlorhydia. Such circumstances may mean an atrophic gastritis or an early malignant lesion, not identifiable by X-ray examination. Gastroscopy is likely to be the only method by which such conditions may be diagnosed other than by surgical intervention. The following case is indicative.

**Case 6.** F. P., a 58-year-old white man, who had in the past 6 to 8 months gradually lost his appetite, had the additional complaints of periodic heartburn and the loss of 10 pounds in weight over a corresponding period. Histamine-enforced gastric analysis revealed a free hydrochloric acid level of 5 degrees. X-ray films of the upper gastrointestinal tract were entirely negative. Gastroscopy at this point showed a gastric membrane in which the predominating picture was that of atrophic gastritis with occasional islands of hypertrophic membrane. Therapy with iron, liver, $B_{12}$, and dilute hydrochloric acid resulted in marked general clinical improvement including the loss of gastrointestinal symptoms.

(*Continued on page 60*)

# DAVID GRUBY AND THE FUNGUS GROWTHS

EDWARD PODOLSKY, M.D.
*Brooklyn, New York*

HEINRICH HEINE, the poet, was seriously ill. He was plagued by a thousand and one different aches and pains. He had a gnawing pain in his back. His eyes were not able to focus and he experienced vague pains in them. Yet he was confident and reassured, for he had Dr. David Gruby as his attending physician. To Dr. Gruby's comforting words that he would live a long life in spite of his disabling ailment, Heine retorted, "Don't tell my wife." In the course of the examination Dr. Gruby asked Heine if he could whistle; the poet replied, "Unfortunately not loud enough to hiss down the plays of Scribe." Heine had been rather promiscuous in his earlier years and had contracted a venereal disease which was now making itself felt. There was no doubt in Gruby's mind that Heine was suffering from syphilis of the central nervous system.

Another famous patient of Dr. Gruby's was Alexander Dumas, the elder. He was suffering from too much work and too little exercise. Dr. Gruby advised him as follows: "Tomorrow morning leave the house at 6 a.m. and buy three apples at a certain fruiterer. Eat the first at the Arc de Triomphe, the second at the Quai d'Orsay and the third at the Place de La Madeleine. Then return home on foot." At the end of 2 weeks of this unorthodox treatment Dumas was in a much happier condition.

Not all of Gruby's patients were famous. He was once called to see a rather fashionable lady who was suffering from paralysis of the legs which had resisted all treatment. "Take care of my tapestry," she cautioned the servants who were bringing lamps to light the room. "It would be a misfortune should it be stained with oil." Hearing this, Gruby took the oil container and pretended to examine it. He slyly allowed a drop of oil to fall near the tapestry. The patient was horrified and with one leap jumped out of her chair and rescued her precious tapestry.

Another time he was consulted by a woman who was highly nervous and suffered a great deal of gastric distress. She was thought to be seriously ill by her friends and mostly by herself. This is what Dr. Gruby advised her to do: "You will rise tomorrow at 8:30 a.m. and drink a cup of tea. Then you must walk the Avenue du Bois, and at the end of your walk, drink a glass of water. Back home at 10 a.m. you will take a second cup of tea. The important thing is that the glass of water must be between the two cups of tea."

One day this woman awoke rather late. As it was time for the glass of water, she omitted the first cup of tea. After a while she experienced distress and pain in the stomach and Dr. Gruby was called. "Very grave," he said. "Happily there is a way of putting the water in its proper place. The cup of tea that you did not take from above (by mouth) you will administer to yourself from below, and thus reëstablish the equilibrium."

Dr. Gruby's handwriting was very illegible. At the end of a consultation he would often have the patient write the prescription at his dictation. His manner with patients was curt and dictatorial, and he would brook no interference with his favorite methods. If a patient was too long-winded he would pretend to fall asleep. When the patient complained he would ask, "What else could I do? Your words are so much gas!"

Among other things, Gruby was very careless about financial matters. His fee was fixed, 10 francs, regardless of the time of day or the financial state of his patient. Checks and accounts were scattered in great disorder in his consulting room.

* * * * *

David Gruby was born on August 20, 1810, in a little village in South Hungary. At the time of his birth his parents had a little farm and were in very reduced circumstances. David was the youngest of the children and farming was not to his liking. His parents had intended to apprentice him to a watchmaker, but David was not very enthusiastic about the idea. He had planned to become a doctor, and he convinced his parents that that was what he was going to be.

His parents saw it his way, and his father gave David a 50-*kruetzer* piece, all that he could afford. His mother placed a loaf of bread and an apple in a knapsack, and David was off to realize his ambitions to become a physician.

He worked his way from village to village, finally reaching the city of Pest. He was not eligible for admission to the university. He would stand in the doorway and listen attentively to the lectures. This peculiar practice resulted in his becoming the butt of the students' pranks and horseplay, but he did not mind. The professor, impressed by his earnest desire to learn, permitted him to listen to his lectures from a seat in the classroom. It was not long before Gruby had absorbed all the learning in Pest (or so he fondly thought he had), and he journeyed on to Vienna for more learning. He found lodgings in the Kuss den Pfenning, an old inn in which Paracelsus, another greatly talented physician of former times, had lived many years before.

David was so poor that he was obliged to room with another student in order to buy candles for light. The two friends would study their lessons together and then repeat them to each other, first snuffing out the candles so that they could get as much light out of them as possible.

Gruby needed a microscope for his studies, but he was too poor to buy one. He made one himself. He was interested particularly in anatomy, physiology and pathology, and the first paper he wrote was on the nature of pus cells.

On March 18, 1839, he was granted his degree, Doctor of Medicine. Dr. von Wattemann, one of the leading surgeons of the day, permitted Gruby to assist him at his operations. He was extremely skillful, and his work attracted so much attention that he was offered an extraordinary professorship at Vienna, but he refused it for personal reasons. He had recently made the acquaintance of the French surgeon, Roux, who was interested in Gruby's anatomical researches and advised him to go to Paris.

After he had been in England a short time Gruby arrived in Paris in the winter of 1840. He went at once to the Hôpital Saint-Louis and the Saltpetriere. In these hospitals there were at this time the leading dermatologists and neurologists of the world.

Gruby loved France and Paris, and in 1848 he became a French citizen. His reputation as a physician soon spread throughout the country. He was also a teacher, and among his pupils were Claude Bernard, Flourens, Milne-Edwards and Magendie, men who were later to attain world-wide fame as physicians.

Being very adaptable by natural inclinations Gruby became a genuine Parisian in a short time. He became intensely interested in diseases of the skin and began a series of investigations of parasitic diseases of the skin. His first contributions to this new branch of knowledge were met with open ridicule. Why should a doctor be interested in molds? Why should he spend so much time in hothouses among plants? What was he up to, anyway?

There had been other physicians who observed that some forms of skin diseases were associated with fungus growths. In 1837 Robert Remak found that the crusts caused by a skin disease known as favus were made up of fungus filaments. It did not occur to him that the fungus was the cause of the disease. Two years later Schönlein found that the so-called dry pustules of favus were of vegetable origin, but that was as far as he went.

It was David Gruby who in 1841 discovered that the true cause of all human ringworm affections was fungi. He turned his attention to other skin ailments in an attempt to learn the true cause of their origin. His next skin study was on thrush. He proved that the membrane in this disease was practically a pure culture of a parasitic body.

The next few years were devoted almost exclusively to the study of various ailments of the skin. He applied himself to the study of the affections of the hairy regions and found that quite a few diseases of that area were caused by fungi of various kinds.

Other great discoveries followed. Gruby's original researches proved definitely that fungi, parasitic growths, were the causes of many diseases of the skin. This marked a new era in medicine, for from this point many other physicians carried on and proved that fungi caused not only diseases of the skin but also diseases in other parts of the body.

The first years of Gruby's residence in France were applied exclusively to research. From 1840 to 1845 he was occupied with studies on the fungus nature of certain skin ailments. He also made studies in comparative anatomy. He studied the venous system of frogs, the purple-bearing organ of shellfish, and an epidemic disease of potatoes.

In 1847 and 1848 Gruby experimented with the action of ether and chloroform on animals. He discovered a great many new and interesting facts about the actions of these anesthetics which were later applied in safeguarding procedures when using these agents on human beings.

In 1854 he received his license to practice medicine, and thereafter he devoted himself wholeheartedly to his practice. Many regretted his giving up research, for he might have made many significant contributions to medical research, but Gruby felt that he wanted to practice clinical medicine.

It was not long before he became a leading and fashionable physician, noted for his unusual prescriptions and advice. His practice was also quite unusual, for he had among his patients many whose names are immortal in all fields of human endeavor. Among them were Chopin, Heine, George Sand, Liszt, and Alphonse Daudet. Others were Max Nordau, himself a physician, Alexander Dumas, father and son, and Ambroise Thomas, composer of the opera "Mignon."

David Gruby was a physician with advanced ideas. He employed suggestion therapy with very remarkable results. He had many patients suffering from psychoneurosis and stomach disorders of functional origin, and he obtained very good results in these cases.

His apartment was a large, spacious room filled with exotic plants. Alongside of beautiful microscopic preparations were books and pamphlets in disorderly profusion. Scattered all about were old journals, covering chairs and tables. On the entrance of a patient it was necessary quite often to clear the chairs of the accumulated books and papers before he could be seated.

Gruby was rather unprepossessing in appearance; he was short and somewhat stocky and wore his hair long and combed back. He had soft, deep eyes, a smooth face, and a rather large mouth. He spoke French rather poorly, with a pronounced German accent, and he was brief and abrupt in his speech. He never married.

In addition to medicine Gruby was interested in many other things. He installed an astronomical and meteorological observatory in a house in the Montmartre in the Rue Lepic. During the war of 1870 he placed it at the disposal of the military authorities who found it of great service. He subscribed heavily to the funds for the relief of the wounded, gave 10,000 francs to form a company of francs-tireurs in his *arrondissement*, and donated a plot of land for a parade ground for drilling troops.

During the war he was not idle. He attended emergency dressing stations. He endeavored to

(*Continued on page 60*)

# President's Page

## MEDICARE—WHAT IS NEXT?

At the time of this writing, the Medical Society has just approved a contract with the Department of Defense for the care of military dependents. The schedule of fees embodied in this contract is in many respects acceptable to both the Department of Defense and the Society's membership, and in other respects it leaves something to be desired.

The contract is in effect for a period of six months and is subject to re-negotiation during this coming interval. Experience gained during this time at both the local and national level will to a degree determine patterns upon which a more equitable contract can evolve. During this time the Medical Society should prepare to defend certain current items which may seem too high to the Department of Defense. We must also present irrefutable evidence that certain items are too low. This same type of evidence may exist, demonstrating that the maximum ceiling levels on fees are not realistic.

The Department of Defense thinks in terms of the directive, which states that fees must be fair and equitable for the community. This may be rightfully interpreted as the average fee. Full coverage is required in cases which for the most part require hospitalization, with payment of the first $25.00 of hospitalization by the patient. With these stipulations, it follows that the fee schedule should be realistic to the degree that it is based on average fees for each procedure that are *collected from private patients in the community.* This does not mean a theoretical desirable fee, nor necessarily a specialist's fee, and not the fee under Blue Shield. We must remember that Blue Shield fees are not for full coverage and that in many instances it is felt that the Blue Shield fee represents a subsidy by Participating Physicians. The Department of Defense staunchly insists that they do not want physicians to feel that they are in any way subsidizing Medicare.

We must arrive at a full and mutual understanding with the Department of Defense as to the connotations of full coverage in terms of after-care.

By the time this is published, it is hoped that mechanisms for establishing the above considerations as facts will be under way by the Society membership. In other words, we have six months in which to "prepare our case."

Ralph M. Caulk

# Editorials

## THE PRICE OF FREEDOM*

All of us . . . sooner or later . . . learn that today's events do not just swirl around us, but involve each of us. As doctors we cannot get away from them by claiming that our only interest is in the sick, and that we cannot be bothered by political, social and economic problems. These matters demand attention from the doctor as well as the lawyer, the businessman, the newspaper editor, the labor leader, and the worker.

If we are concerned about what happens on the international, national, and local fronts—and we should be—then certainly we cannot afford to be disinterested in what happens in our own area of health and medical affairs. Yet there is apathy in our ranks.

Today there is a greater need for a united, forceful and informed profession than ever before. We have been caught in the throes of a social revolution which demanded something for nothing. Changes have been taking place all around us, and medicine has not escaped unscathed.

For example, Public Law 569 (the bill providing medical care for military dependents) has become effective throughout the land. Contracts already have been signed with the Government by the majority of our state societies. No longer can any doctor claim that this law does not affect him. No longer can he say that Government laws really are not changing the practice of medicine.

Public Law 880, better known to all of us as H.R. 7225, is another case in point. Medicine now is facing the problem of protecting the tax-paying public from abuses and of coöperating with the Government to carry out the provisions of the law. The law is now on the books, and we must provide the leadership necessary to make it work as well as possible.

It was encouraging to hear the Honorable Ezra Taft Benson, Secretary of Agriculture, say last week before the American Association of Land Grant Colleges and Universities:

"Sooner or later, the accumulation of power in a central government leads to a loss of freedom. . . . Raids on the Federal Treasury can be all too readily accomplished by an organized few over the feeble protests of an apathetic majority. With more and more activity centered in the Federal Government, the relationship between the cost and the benefits of Government programs becomes obscure. What follows is the voting of public money without having to accept direct local responsibility for higher taxes. . . .

"If the present shift of power from state to Federal authority which started 25 years ago is allowed to continue, the states may be left hollow shells."

It was encouraging to hear such comments from a member of the President's Cabinet. I only wish that all members of the official family, and, more important, every member of the United States Congress, felt the same way.

The expression of this philosophy, with which medicine so heartily agrees, sounds good, but putting it into practice is the thing we are really interested in.

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* Portion of an address delivered, November 27, 1956, at the opening session of the House of Delegates during the Clinical Meeting of the American Medical Association in Seattle, Washington.

***Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia.***

Today, the medical profession, along with business and industry, is caught between those who desire to promote sound government and those who desire even more intensely to perpetuate party power. Unfortunately, in recent years a benevolent Federal Government appears more attractive to the voting public than the preservation of individual freedom. Medicine must do its utmost to reverse this trend.

In my travels around the country as your representative the last 18 months, I have seen little dissension or rancor within our ranks. However, I must report that I have seen too much complacency over governmental encroachment into medical affairs. And I am deadly serious when I say to you that apathy by the few, or by the many, can be detrimental to all.

No nation can merely reap the benefits of freedom; it also must sow seeds of freedom.

In medicine the situation is the same. If an apathetic medical profession takes its freedom for granted, it will be the beginning of the end. A strong, free profession must work for freedom so that it may live in freedom. And history tells us that once medicine loses its freedom, other fields of private endeavor are immediately in danger.

I do not wish to paint a dark or distorted picture of medicine's free status and its stature in America today. But I do believe words of caution and an appeal for vigilance are in order.

The road of apathy and disunity can only lead to disorder and perhaps disintegration, and we must sound a warning to all our colleagues who don't care, or who are pulling in the opposite direction. The road of alertness, action and unity is the proper road for all of us to be traveling together.

If I had just one wish for the coming year, it would be to command the time and talents of the 160,000 physicians in the American Medical Association. I would set us all to the task of emphasizing and reëmphasizing the absolute necessity of patient and professional freedom.

Dwight H. Murray, M.D.
*President,*
*American Medical Association*

## MEDICAL EDUCATION AND TELEVISION

The problem of continuous postgraduate medical education has been a knotty one. Nowadays one can hardly glance at a professional journal or the transcript of the proceedings of a major medical meeting without encountering an appeal for augmenting the study opportunities of the practicing physician. An editorial in the *Journal of the American Medical Association* on January 1, 1955 summarized the dilemma: "The increasing demand for refresher and other special short courses reflects a desire on the part of practicing physicians to receive well-organized, systematic presentation of new medical knowledge . . . However, physicians in both urban and rural areas find it difficult to absent themselves from their practices to attend postgraduate courses without curtailing the effective medical care they render to their communities, to say nothing of the economic losses they may incur through the loss of practice and the expenses of travel and maintenance while away." The editorial expresses the hope that "television will provide a solution to this problem as a medium through which medical centers [can] extend the walls of their laboratories, lecture halls, hospital wards, and clinics to encompass virtually all of the physicians in the country."

Almost as if by way of reply, television showed signs of fulfilling this hope just a year later. On January 18, 1956, from Boston, Massachusetts, the first in a series of "Grand Rounds" telecasts was beamed by closed-circuit television to almost 20,000 physicians gathered in more than 50 communities throughout the United States. While this was not the first educational telecast provided for the profession, it represented in many ways the maturing of the medium for this specialized purpose.

Earlier telecasts from the University of Utah School of Medicine, beamed on regular commercial channels, and closed-circuit "Videclinics" had taken the form either of basic reviews of diagnosis and therapy for a given syndrome or formally prepared discussions of a given field of clinical medicine, e.g., coronary artery disease, psychiatry in general practice, etc.

Now through a bold, but natural step, the traditional hospital staff meeting held in the privacy of a conference room or amphitheater, where frank give-and-take may prevail, was thrown open to doctors in every corner of the country. Distinguished clinicians from several medical schools were invited to guide the proceedings at the Tufts University School of Medicine in Boston. They faced the cameras and the cases without advance knowledge of the problems to be encountered. They were confronted by a series of patients, each presenting an "acute abdominal problem." Some of these cases were pre-recorded on sound film. The surgical findings, likewise indelibly stamped on film, were withheld from the clinical leaders until the national medical audience had an opportunity to see how the problem was faced, what diagnostic criteria were considered important, what therapeutic regimens were embraced. There was discussion, dissent, difficulties, but the experience for all was richly rewarding and provocative.

One month later a similar television session was held to consider the problems presented by "the cardiac patient in stress: work, surgery and pregnancy." To demonstrate the safe management of the cardiac patient during surgery, the anesthesiologist during the course of this 90-minute session went to the operating room and took with him 22,000 colleagues who were able to share this experience from the unequaled vantage point provided by the eye of the television camera.

When a patient with severe cardiac valvular disease in the third trimester of her pregnancy was presented for the purpose of considering how her decompensation might best be handled, Dr. Samuel A. Levine, of Boston, auscultated the heart and the murmur was heard from coast to coast.

The most recent seminar in this new series took place on October 17 and dealt with the commonly encountered problem of cancer borderlines as it related to three clinical areas: the thyroid, the lung, and the stomach. During this session many practitioners had an opportunity to see Dr. Richard H. Overholt's thoracic surgical team at work during an actual surgical procedure on a case that had just been presented to the clinical leaders. But the importance of this "Rounds" lay in the clinical discrimination, evaluation of various screening procedures, and in decisions regarding medical and surgical management propounded by the panelists.

Postgraduate medical education, like undergraduate medical education, to be fully successful must be interestingly and dynamically presented. The television technic can succeed only when it provides a contribution that cannot be met by the traditional methods, such as books, journals, lectures, etc. To employ television for a review of facts will therefore not suffice. The merit of this new medium lies in its ability to bring before the medical profession critical intelligences at work. Since the days of Hippocrates this has always been the stuff of which good medical education has consisted. Osler once pointed out that medicine is learned on the wards and not in the classrooms. The new electronic medium can take us all into the wards, operating rooms, the pathology laboratories, and, more important, into the minds of our great teachers.

We are happy to note that this project stemmed from the vision of one of our pharmaceutical manufacturers. The Upjohn Company conceived and has supported this project, thus making the series available without cost to every physician. The response to the project has been gratifying. One Midwestern physician who traveled 200 miles to attend a telecast stated subsequently that "I would go a thousand miles to see and hear these men again." The series, we understand, is to continue, and offers a meaningful contribution to the solution of an increasingly serious problem in postgraduate medical education.

Stephen W. Schwartz
*Director, Medical Radio and Television Institute*

## ATTEND THE MIDWINTER SEMINAR

The announcement and program for the Sixth Midwinter Seminar sponsored by the Medical Society of the District of Columbia are included in this month's issue of the Medical Annals.

As all of you know, the Seminar, which was instituted 6 years ago, is one of the highlights of our Society's activities. Some may wonder why another scientific program when we have so many others in the District?

Primarily, our Society has as its first function the promotion of the science and art of medicine through its membership. This may be lost sight of from time to time as the result of a plethora of other problems brought, by necessity, before our members. We must not neglect, however, our first obligation to the community, which is good medical care.

The advances in modern medicine are so rapid that it becomes almost impossible for the practicing physician to keep *au courant* by simply reading the literature. The vast amount of research and resultant medical contributions frequently lead to either confusion or misconception through their conclusions when applied to the problems of the private practitioner. The most sincere and learned investigators will disagree in their writings, and thus the very purpose of their work is sometimes defeated. The practitioner is basically conservative and will await a clearer understanding before giving his patient the benefits gained by this research rather than doing him harm by improper application of diagnostic and therapeutic methods still not clearly understood.

It is for this reason that seminars like this one are offered to the membership. This year your Program Committee has chosen subjects for discussion from among those illnesses seen daily in our practices. These discussions will be presented in a panel type of program so as to facilitate the coverage of a broader concept of these problems.

You may conjecture why discussion of congestive heart failure was chosen. Everyone knows how to treat that! What a mistake that is. Even the diagnosis of early heart failure is one that is frequently missed. In some instances the physician has even forgotten the physiology of heart failure. A misuse of the multiple forms of digitalis is seen every day. It should be required that all of us from time to time be provided with an opportunity of reviewing the modern concepts of this syndrome and its treatment.

Similarly with our other subjects for discussion. They are to our mind practical and educational. Our acknowledgment of the necessity for such seminars as ours shows an acute awareness by our Society of its primary function, to which we have previously referred, namely, the conscientious provision of good medical care in our community through an informed profession. Nowhere in the country is better overall care available to its citizens than in the District of Columbia.

The day any of us feel there is nothing more to be learned or gained by such a program as this will be a sorry one indeed. Our profession has remained a great one because its members learn a little more of humility each day. Let us continue our education and our progress. Attend the Sixth Midwinter Seminar and make yourself a better physician as well as a better citizen.

William B. Walsh, M.D.
*Chairman, Program Committee*

# In and Out of Focus

BY THE OBSERVER

***Professional Relations***

Far be it from us to suggest that emphasis on public relations programs by medical societies is not justified. However, it would appear that in their enthusiasm for these programs many societies overlook a very important fact. Without the understanding and support of a sympathetic profession, such programs are doomed to failure.

It is significant that in a recent public opinion survey conducted by the American Medical Association, physicians were more critical of their medical organizations than was the general public. Many reasons were advanced for this, among them the ineptness of some medical leaders. In a far larger measure, however, it is due to the average member's unfamiliarity with the activities, policies and objectives of his medical organization. In other words, he is a dues-paying member—period.

This situation is, of course, not new. For many years officers of national, state and county medical organizations have struggled with this problem. Despairingly, they have repeatedly asked, "What can we do to get members to know what we are doing and striving for?"

On a national level, AMA officials at one time seemed of the belief that good public relations programs might be the solution. After all, they were more palatable and glamorous than intra-organizational programs. The AMA urged physicians to attend PR conferences and institutes, which a number did. Undoubtedly, this had a beneficial effect in a limited way. However, there were thousands of physicians still woefully uninformed about current medical issues and what medical organizations were doing about them.

Recognizing this fact, the AMA stepped up its professional relations program with attractive pamphlets and a color motion picture, "The Case of the Doubting Doctor." The picture is frankly a bid for active physician-interest in, and support of, organized medicine.

On a more modest scale, state and county medical societies are confronted with the same problem. Few have sufficient funds to go in for such ambitious projects as motion pictures, informative but costly booklets, or more or less expensive social affairs. Medium-sized medical societies such as ours must be content to do what they can afford, which is to say modest.

Supplementing such a medium as the MEDICAL ANNALS, which has long been used to inform the Society membership about what is going on inside the organization, have been the membership and round table luncheons. The former were inaugurated for the purpose of orienting recently elected members of the Society in regard to its affairs and to provide an opportunity for fraternization. The object of the latter has been to enlighten members in regard to the malpractice situation.

A news letter, *Current Medical Events in the Nation's Capital*, has recently been added to bulletins and letters which keep members abreast of developments. Your Observer plans to supplement these efforts with an informational series of articles in this column, describing functions of various officers, boards and committees, in what he hopes will be a readable and interesting manner. If it will implement, to a modest degree, efforts now being made to acquaint members with their Society and who and what make it tick, he will be content.

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***I. The Society's Presidency***

Chapter V. Article I. Section 2 of the Constitution and By-laws reads: "The President shall preside over the meetings of the Society; call special meetings as provided in

# *Sixth Midwinter Seminar*

OF

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

February 19, 20 and 21, 1957

MEDICAL SOCIETY BUILDING     1718 M Street, N.W.

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## TUESDAY EVENING, FEBRUARY 19, 8 P.M.

### SYMPOSIUM ON CONGESTIVE HEART FAILURE

**Wallace M. Yater, M.D.,** *Moderator*
Director, Yater Clinic

The Patho-physiology of Congestive Heart Failure
**Arthur C. Guyton, M.D.**
Professor of Physiology and Biophysics, University of Mississippi School of Medicine

Myocardial Efficiency in Congestive Heart Failure
**Eugene Braunwald, M.D.**
Clinical Associate of the Cardiovascular Laboratory of Physiology, National Heart Institute

The Clinical Manifestations of Congestive Heart Failure
**Leslie H. French, M.D.**
Chief of Cardiac Station, Prince Georges Hospital

The Pharmacology of the Therapeutic Employed in Congestive Heart Failure
**W. Proctor Harvey, M.D.**
Director of the Heart Station; Assistant Professor of Medicine, Georgetown University School of Medicine

### QUESTION AND ANSWER PERIOD—"STUMP THE EXPERTS"

Questions Must Be Submitted in Writing

PANELISTS

Arthur C. Guyton, M.D.
Leslie H. French, M.D.
Eugene Braunwald, M.D.
W. Proctor Harvey, M.D.

## WEDNESDAY EVENING, FEBRUARY 20, 8 P.M.

**William B. Walsh, M.D.** *Presiding*
Clinical Assistant Professor of Medicine, Georgetown University School of Medicine

Proteinuria and Its Interpretations
**George E. Schreiner, M.D.**
Assistant Professor of Medicine; Director of Renal Clinic, Georgetown University School of Medicine

## PANEL ON THE MANAGEMENT OF RENAL DISEASE

NEPHROTIC SYNDROME

**Leonard B. Berman, M.D.**

Instructor in Medicine; Fellow, Kidney Research Laboratory, Georgetown University School of Medicine.

ACUTE GLOMERULONEPHRITIS

**Alvin Parrish, M.D.**

Assistant Director of Medical Service, Veterans Administration Hospital

ACIDOSIS OF RENAL FAILURE

**E. Lovell Becker, M.D.**

Assistant Professor of Medicine, Medical College of Virginia, Richmond

DISCUSSION PERIOD

## THURSDAY EVENING, FEBRUARY 21, 8 P.M.

**Howard S. Madigan, M.D.** *Presiding*

Instructor in Surgery, Georgetown University School of Medicine

OBSERVATIONS ON THE TREATMENT OF EMPHYSEMA

**Harold L. Israel, M.D.**

Associate Professor of Medicine, Graduate School of Medicine, University of Pennsylvania; Chief, Department of Medicine, Philadelphia General Hospital; Associate Physician, Graduate Hospital

## PANEL DISCUSSION ON EMPHYSEMA

**Sol Katz M.D.**, *Moderator*

Chief, Pulmonary Disease Division, D. C. General Hospital; Adjunct Clinical Professor of Medicine, Georgetown and George Washington University Schools of Medicine

**Edgar W. Davis, M.D.**

Professor of Thoracic Surgery, Georgetown University School of Medicine; Chief, Thoracic Surgical Service, Georgetown Division, D. C. General Hospital

**Peter Luchsinger, M.D.**

Co-director, Cardio-Pulmonary Function Laboratory, D. C. General Hospital; Instructor in Medicine, Georgetown University School of Medicine

*Plan to attend the*

## SOCIAL HOUR

THURSDAY EVENING, FEBRUARY 21, 1957

*Following the Scientific Program*

REFRESHMENTS

This will afford an excellent opportunity to get acquainted with your fellow physicians.

Chapter III, Article I, Sec. 4; and shall perform such duties as may be imposed on him by the Society, and in general as pertain to his office. He shall be a member ex officio of the Executive Board and shall appoint all members of the various committees."

The above does not begin to tell the story of what today's President of the Medical Society does. Back in 1939, when the present Constitution and By-laws was adopted, the President was the titular head of the Society. However, authority resided to a greater extent than at present with the Chairman of the Executive Board. This came about largely because of the controversy in which the Society was at that time involved. Heated and sometimes acrimonious discussions at meetings had left the organization in such a state of turmoil that immediate steps were decided upon to bring about its stabilization.

One of these was the replacement of the Executive Committee with what is now the Executive Board. The Committee, which had consisted of some 30 members, had proved unwieldy and reportedly had become largely a debating society. The Board which replaced it, consisting of 7 members, including the President, President-elect, senior delegate to the AMA, and 4 members of the Society, it was agreed, would be much more efficient.

The first chairman of the Board was deeply interested and experienced in Society affairs. He held office as chairman for the first 4 years. Since that time greater responsibilities for leadership have fallen upon the President.

As President-elect he is a voting member of the Executive Board. Before his initial year on the Board is completed, he will have accumulated considerable background and will have learned firsthand how complex a modern medical society can be. This naturally has had its effect. Some of his preconceived ideas have been discarded and he gains a new perspective of the job which he is about to take over.

Not infrequently when members talk about the presidency of the Society they express themselves somewhat as follows: "I would not want the job under any circumstances." "Takes up too much time." "I want no part of medical politics." "Too many headaches for me." "Being president is one way to lose friends and gain enemies."

The fact is that such statements have little basis; in other words—"It ain't necessarily so!" Usually the situation is quite the reverse. Having served with many presidents, your Observer can testify that while all go through more or less trying periods, few have found them more than annoying. Most agree that while there is little appreciation expressed by members for their efforts, nevertheless they find personal satisfaction in accomplishment.

What is being President of the Society really like? Here is what your Observer believes is a fairly accurate description:

Naturally the recently elected President is elated over his election. This may give way, and often does, to doubts about his qualifications for the job. He is pleased to learn, however, that he will have a year to learn the ropes before he is on his own. He talks over his plans for his administration with his predecessor and the Secretary, who is the Society's executive officer. He learns from him something about the "business side" of the Society's affairs and is somewhat surprised at their complexity.

Months pass rapidly, and before he realizes it, he must appoint committees to serve during his year in office. He finds that there are 31 committees, to which some 300 members are usually appointed. He takes home the roster of the Society's membership, pores over it, and finally decides to circularize the membership for volunteers. The response is excellent, but then he discovers the difficulties involved in placing those who wish to serve on the committees of their choice. He regretfully concludes that there are some he cannot place. He wonders if the system is as good as it was said to be.

Finally, the big day arrives—July 1—the day

DR. NICHOLSON HONORED

Dr. Margaret M. Nicholson accepting Certificate for Meritorious Service from President Caulk, November 12, 1956, during the meeting of the Southern Medical Association.

on which he takes office. In the months preceding his ascendancy, he has been receiving invitations to participate in various affairs as the head of the organization. Now these commitments must be kept. They include appearances at conferences, luncheons, dinners, and so on. From now on he will not only be the Society's head, but its spokesman.

Most of his participation in meetings and social affairs occurs between October and May. If he likes being President at all, he enjoys speaking to other professional bodies or to lay groups about the Society and some of its activities. A by-product which he finds most pleasing is the opportunity of meeting people and making new friends.

He has by this time become accustomed to particpating in the proceedings of the Executive Board. However, his sphere of activity has broadened; committees of the Society as well as the Board have a claim on his time. As he well knows, the effectiveness of committees depends to a great extent on his selection of their personnel. This may become a deciding factor in the success or failure of his administration. Some of the committee members, he learns, acquit themselves satisfactorily without prodding; a few do a superior job on their own initiative; and a minority are indifferent and of little or no assistance. The President attends at least one or more meetings of each committee to see how things are going and to give such support and direction as are indicated.

Few presidents escape crises. Some are unfortunate enough to be in office when seemingly catastrophic ones occur. In these circumstances he must make real sacrifices in time, and sometimes money. The strain may be considerable, but this is often offset by the excitement of doing something that is different and important. Physically, the situation may take its toll, for there are many meetings, innumerable telephone calls, and conversations ad infinitum. Yet, as has been stated, there is something fascinating about shaping the destiny of an organization.

Where District citizens are concerned, the President becomes a far more important figure than he ever dreamed of being. Generally recognized by them as being medicine's leader in the community, he has, without exception, in your Observer's memory, exemplified the high conduct that medicine proclaims. The Society can be proud of its presidents, past and present.

This description of the President's duties is of necessity incomplete, but it should dispel any impression that his is an honorary position. In fact, in a modern medical society, the presidency is a working job. In spite of this, your Observer can report that few presidents of his acquaintance, in fact only one, has looked forward to the termination of his responsibilities with any elation. The usual reaction has been that they would like to go on for a time longer if the Society's Constitution and By-laws permitted and the Society approved. Fortunately, most of them are given an opportunity to serve as members of the Executive Board, where their experience and judgment are of the greatest value.

P.S. According to one President, the wife should receive an award for meritorious service because she "holds the fort" in the home alone for a good part of the year.

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***The Doctors' Symphony Orchestra***

Those who like serious music, and they seem to be growing in number, had much praise for the Doctors' Symphony Orchestra of Washington, which made two appearances during the recent meeting of the Southern Medical Association. The program presented on both occasions was identical—Linley's *Overture to The Duenna* and three movements of Haydn's *Symphony No. 80 in D Minor.*

Such music is a challenge to the best amateur organization. How well our own Doctors' Orchestra acquitted itself was described by *The Washington Post's* eminent music critic, Paul Hume. The day following the Orchestra's "Miniature Concert" at the Fourth Annual Dinner for Doctors' Office Staffs, Mr. Hume wrote:

> "The doctors . . . displayed not only a spirited enthusiasm, but a sense of real style and vigor in their work, qualities not easily achieved in such outfits. Unity of bowing among the violins resulted in a tone of solid substance and gratifying quality. The sense of ensemble throughout the orchestra is a real credit to these men and women.
>
> "Entered on the imposing list of Washington amateur orchestras, the Doctors' Symphony is by no means the least impressive."

As Mr. Hume suggests, much of the credit, perhaps most of it, belongs to Richard W. Dirksen, the conductor, well known as an organist and associate choirmaster at the Washington Cathedral. Mr. Dirksen, Mr. Hume points out, has long been recognized as one of the Capital's outstanding musicians.

"In his latest role of stern disciplinarian and talented leader of the Orchestra," Mr. Hume observes, "he shows the truth of the old belief that an amateur organization in the hands of a gifted musician can produce remarkable results."

It in no way detracts from Mr. Dirksen's contribution to the Orchestra's success to say that without promising material with which to work, his accomplishments would not have been possible. Even this would not have been enough, for without the devoted and earnest support of its members the Orchestra would long since have gone out of existence. Your Observer can testify that not only in this instance, but generally speaking, no group is more devoted to their avocation than interested amateur musicians. They will work tirelessly and enthusiastically

THE DOCTORS' SYMPHONY ORCHESTRA

for perfection. Hours mean nothing to them in this pursuit.

So here is a salute to members of the Doctors' Symphony Orchestra, especially to its faithful concertmaster, Dr. Isadore Alpher. Kudos are also in order to its nonplaying but loyal and enthusiastic President, Dr. Richard H. Todd. Thanks, too, should go to the organization's financial "angels," the Medical Society, and, more recently, Mr. Joseph E. Jones of Mutual of Omaha.

Highly elated because of the Orchestra's success, Dr. Todd wrote the Executive Board that Mr. Dirksen had suggested that a performance of Handel's *Messiah* be undertaken, with the Orchestra supporting a chorus of 100 voices obtained from the medical, dental, and nursing professions. Mr. Dirksen thought it would be possible, providing rehearsals were begun in the near future, to present the oratorio in December 1957. Any funds raised by the performance, Dr. Todd explained, would be contributed to the Woman's Auxiliary Nurses' Scholarship Fund. The Board endorsed the project and notified Dr. Todd to this effect.

All this is a far cry from the first rehearsals at Gallaudet College for the Deaf. Whatever those surroundings might have suggested to the facetious, they were certainly not prophetic of the future!

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### *Versatile Doctor Thornton*

Most physicians have to be content with modest accomplishments in their chosen field. They have little time to excel in avocations. That was not true of their more ambitious predecessors. Turning back the pages of time, one is struck by the variety of their interests and the success which attended their extracurricular pursuits.

One would be safe in assuming that there are few among the readers of this column who would recognize the name of Dr. William Thornton. Who was he? Well, he was no less than one of the most versatile figures in Washington's medical history. His contemporaries described him as a genius, which it would appear had a substantial basis in fact.

Physician, man of letters, artist, poet, architect, humanitarian, soldier, and public official, his was a full, and, in many ways, a tempestuous life. Born May 20, 1759 on the little island of Jost Van Dyke in the Virgin Islands, his parents were members of a small community of the Society of Friends centered at Tortola. His early education was received in England. He subsequently went to Scotland, where he attended the University of Edinburgh Medical School, later receiving his medical degree from Aberdeen University in 1784. He lived in Paris for two years before returning to Tortola, where he married, apparently intending to remain there. However, he decided to throw in his lot with the newly independent American states, and in 1787 he arrived in New York. The record shows that he became an American citizen a year later.

Because of his many interests, and his tireless pursuit of them, he devoted only a small portion of his time to medicine, although it seems that when the opportunity offered he took an active part in medical meetings. His becoming Vice President of the Medical Society of the District of Columbia in 1820 would seem to confirm this fact. It is also a matter of record that he addressed a meeting of physicians in New York City on September 13, 1822.

That city was then in the midst of an outbreak of yellow fever. Dr. Thornton expressed the opinion that "yellow fever is generated where it prevails," and that the disease "depends in its origin upon such mephitic vapours as arise from decaying vegetable substances, especially when combined with the noxious effluvia that arise from putrid animal substances, or excrementitious matter, putrid stagnant water exposed to hot sun." Later in his address he recommended that "quick lime and wood ashes be distributed, and [that] this [would] also destroy the maggots and consequently the flies

. . . and the whole city [would be] in a state of perfect salubrity."

Dr. Thornton's fame can hardly be said to rest on his medical accomplishments. His greatest bid for immortality is the fact that his plans for the United States Capitol were accepted, subject to revision. He had little formal training as an architect, for as one historian has put it: "He was not an engineer nor an experienced builder. However, he was an artist with a sense of the beautiful and fit—his judgment along these lines was always sane." These qualifications, it seems, proved to be advantageous as well as a handicap.

His first architectural success was in 1789, when his design for the new Philadelphia library was accepted. This building was the finest of its kind in the country, and remained standing until 1880. The acceptance of his plans for this structure came as a surprise to Dr. Thornton. He said later: "I never thought of architecture, but I got some books and worked a few days, then gave a plan in the ancient Ionic order, which carried the day."

When designs for the Capitol building were called for, Dr. Thornton entered his own. Shortly before they were submitted he had had an opportunity to see plans drawn by the French architect, Etienne Sulpice Hallet, which made him realize the shortcomings of his own. He thereupon made several changes.

To his great elation, his plans were approved. Since he was not an architect by profession, he was not employed to supervise the erection of the Capitol, Hallet being retained for this purpose. Jefferson wrote at the time that revised plans by Hallet were "considered as Dr. Thornton's plans rendered into practicable form." Dr. Thornton was not pleased with the modifications made by Hallet and there was violent disagreement, which resulted in the latter's dismissal in 1795.

Dr. Thornton had been appointed one of the Commissioners of the District of Columbia in 1794. He considered this a mandate to construct the Capitol, which was then being built, according to his own design and proceeded along these lines. However, in 1802 the Board of Commissioners was abolished.

Upon accession to the Presidency, Jefferson appointed Benjamin Latrobe, Sr. as Surveyor of Public Buildings, with the result that Latrobe took over Thornton's authority. It soon became apparent that Latrobe had some plans of his own for the Capitol building. In fact, he wasted no time in putting them into effect. Dr. Thornton, however, refused to be set aside and defended his own ideas in a communication addressed to the Congress, dated January 1, 1805. Bitterness developed between the two men. Latrobe, however, won his point, and alterations of Dr. Thornton's designs were carried out.

Final victory, it appears, went to Dr. Thornton, because, in spite of Latrobe's changes, "Thornton's original scheme still remained, so changed as to destroy much of its beauty and utility, but the broad principles of his plans for this portion of the building were still intact." Latrobe, in 1806, admitted that Jefferson had directed that he should deviate as little as possible from Dr. Thornton's plans, which had been approved by General Washington.

Other architectural creations in Washington and its adjacent area for which Dr. Thornton was responsible include the Octagon House (1798) at 1741 New York Avenue, which was occupied by President Madison after the White House was burned in 1814 and is now a museum sponsored by the American Institute of Architects, Inc.; St. John's Church (1807–09) at O Street and Potomac; Montpelier, home of the Madisons; and additions to the University of Virginia.

Dr. Thornton had no mean gift as an inventor. From approximately 1787 to 1790 he was associated with John Fitch in his experiments with steamboats operated by paddle. Fitch's first boat had been demonstrated on the Delaware River in 1787. Dr. Thornton had a share in the development of the second boat, which made a trip of 20 miles in 1788. The third was named *The Thornton*, and it appears that the doctor contributed more than a little to its completion. It was retired in the winter of 1790.

Here, too, Dr. Thornton became involved in disagreement. After Fulton's success with the first steamship, Dr. Thornton published a pointed "Short Account of the Origin of Steamboats" in 1814. In an angry letter dated in the later months of 1818 he wrote: "I defy any person to point out a single important invention that Mr. Fulton ever made in this [field]. The sooner the truth comes to light, the better . . . if Fulton had lived three months longer, he should not have been able to show his face in any honest man's company, for having thrown the gauntlet to me, I had prepared such a piece as he never could have parried."

These were only two fields of endeavor which engaged the interest of this remarkable man. He was in a true sense a scholar and a gentleman, and, as one of his friends said, "full of talent and eccentricity." It was also said of him that "his company was a complete antidote to dullness," which it would seem was not an understatement.

Upon his death in 1828 the Washington newspaper published an obituary describing Dr. Thornton as one of the vivid personalities of his era: "His temperament was highly sensitive, and, of course, his character was not exempt from those alloys that are blended with genius and which we must take with it, or be content to live without it. He was constant and warm in his friendships, open and decided in his enmities. His love of knowledge was great, his love of liberty greater, but his greatest love was truth!"

* * *

### *Physical Fitness*

The disappointment of many Americans over the outcome of the recent Olympic Games held in Melbourne, Australia, where the Russians racked up 722 points to 593 for our athletes, is readily understandable. The explanation for this turn of events, one U. S. reporter said, was "the avalanche of gymnastic and wrestling points which swept Russia to her first Olympic victory in history." "Russia's gymnasts, cyclists and muscle men of the mat," he reiterated at another point in his story, "unleashed a landslide of gold medal triumphs which sent them into an insurmountable point lead."

Disappointed though American officials were at this showing, they had much to cheer about. For example, United States athletes demonstrated superiority in both track and field events. They also figured prominently in rowing and swimming. The fact remains, as one observer put it, the Soviets had "greater depth" and it paid off.

Without wishing to minimize the Russian victory, or the demonstration of skill by participants from many countries, your Observer wishes to pass along an interesting sidelight on the subject of physical fitness which came to his attention recently.

Some weeks ago, Dr. George Maksim, Chairman of the Society's Committee on Public Information, heard a description of the physical fitness of African natives on NBC's Monitor program. Interested, he wrote to General David Sarnoff, Chairman of Radio Corporation of America, requesting details. This was followed by a letter and a telegram, the latter being shown to your Observer. It read as follows:

> "They say Africa is a continent of strange contrasts, and Mal Whitfield, America's two-time Olympic 800-meter champ, certainly agrees. He learned firsthand on a recent State Department goodwill tour. Whitfield was supposed to show a group of natives something about physical training. Mal did a push-up, and then asked his group to do likewise. One native after another tried, but no one succeeded. Exasperated, Mal tried a different exercise. Just then one of the natives leaped over a fence and disappeared. Whitfield was bug-eyed. The fence was a shade over seven feet high. Then another native raced past him and into the forest. 'Where's he going?' Whitfield inquired. 'To catch an antelope,' was the answer. Mal shook his head and walked away muttering to himself, 'And they couldn't do a push-up!' "

(*Continued on page 60*)

# SPECIAL REPORT OF THE EXECUTIVE BOARD*

Those of you who were present at the special Business Meeting of the Society on October 30, 1956 will recall that the principal item of business was the participation of the Society in the Dependents' Medical Care Program.

The Society acted favorably on the following recommendations of the Committee on Medical Care which had been endorsed by the Executive Board:

> "That the Medical Society of the District of Columbia agree to coöperate with and participate in the program for providing medical care for dependents as defined in this [Dependents' Medical Care] Act.
>
> "That the fee schedule to be submitted to the Department of Defense be one of fair and reasonable fees as determined by the Committee on Medical Care through consultation and study.
>
> "That the said fee schedule be subject to review and negotiation between the Society and the Department of Defense on an annual basis.
>
> "That the Medical Society of the District of Columbia recognize that the existing local Blue Shield fees are not fair and reasonable fees adequately compensating the physician or covering the public under all circumstances within the meaning of this Act.
>
> "That a regulation be sought from the Secretary of Defense authorizing the Medical Society of the District of Columbia to make such fee schedule regulations as needed under the proposed program.
>
> "That the local Blue Shield Plan, known as Medical Service of the District of Columbia, be recommended to the Department of Defense as the desired fiscal agent for the Medical Society of the District of Columbia in so far as Public Law 569 is concerned. Permission is not implied or granted said Medical Service of the District of Columbia to enter into any consideration of the proposed fee schedules under this Act in any manner whatsoever."

On November 14, 1956, the first conference was held by representatives of the Society and the Department of Defense for the purpose of negotiating a contract and fee schedule. The Society's negotiators for a fee schedule were Dr. Ralph M. Caulk, President of the Medical Society, Dr. Wallace M. Yater, Chairman of the Executive Board, and Dr. C. Willard Camalier, Jr., Chairman of the Committee on Medical Care. Although the Society's Legal Counsel, Mr. Warren E. Magee, had previously received and approved the contract, the Society's Secretary, Theodore Wiprud, and George B. McGovern, Manager of Medical Service of the District of Columbia, were present at the initial conference to examine the document and satisfy themselves that it was acceptable. Thereafter they did not attend conferences. Incidentally, a standard contract had been developed by the Department of Defense in coöperation with the Legal Department of the American Medical Association.

It soon became apparent to the Society's negotiators that differences with respect to the fee schedule would be difficult to resolve. The attitude of the Defense Department officials was that a substantial number of items on the schedule were too high. The Society's negotiators, on the other hand, insisted that there could be no concessions. Several long and wearying conferences only served to emphasize the impasse which had developed.

As the deadline, December 7, approached, an understanding between the Society and the Government became an urgent matter. The Department of Defense made it clear that its officials could make no further concessions and pointed out that the fees offered the District Medical Society were substantially above the average. Furthermore, that if a fee schedule could not be negotiated, they would reluctantly have to put the average schedule into effect. It appeared that the Area Surgeons of the Army already had these schedules in their possession to meet just such a situation.

It should be understood that the Defense Department officials were most anxious to avoid this eventuality but were required to inform the Society's negotiators of the alternatives over which they obviously had no control.

It was at this point that the Society's negotiators sought the advice and instructions of the Executive Board. The Board, at a meeting on December 4, instructed them to seek more time in which to negotiate. In compliance with these instructions, this request was made of the Defense Department officials, who pointed out that if there was no contract entered into between the Society and the Government by December 7, the average fee schedule would become effective and the Army's Area Surgeon would take over.

The Society's negotiators then took the matter up again with the Board for further instructions, recommending that a temporary contract be entered into with the Defense Department for the period of one week, during which the negotiated fee

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* Adopted at a special Business Meeting of the Medical Society of the District of Columbia, December 11, 1956.

## STUDY COMMISSION SEEKS SUGGESTIONS

The Study Commission on the Reorganization of the Medical Society, established by a vote of the Society at the Business Meeting on March 7, 1956, with instructions to report its findings and recommendations at the Business Meeting in March, 1957, held a meeting on November 8, 1956.

The Commission reviewed a number of suggestions and deliberated on some made by its own members. It was voted to defer final action until more information was available. Among other things, it was agreed that ideas with respect to this matter should be sought from the Society's membership.

Any member having suggestions to offer on this subject should address his communication to Dr. William P. Herbst, Jr., Chairman, Study Commission on Reorganization of the Medical Society, 1718 M Street, N.W., Washington 6, D. C.

schedule would be in effect. This would provide an opportunity to schedule a special meeting of the Society for its instructions.

It was pointed out that a large number of the fees submitted by the Society had been accepted by the Defense Department officials; that the fees that were not acceptable had been reduced to slightly lower than the maximum permitted by the Defense Department; furthermore, that if approved by the Society, the Defense Department had agreed to enter into a 6 months' contract during which time work could be done on a revised schedule which would be based on several months' experience.

The Board concurred with the Society's negotiators and, as a result, the contract for the period December 7 to 14, 1956, was signed by the President and the Secretary of the Society and by the President and Secretary of Medical Service, the Society's fiscal agent.

Your Board wishes it had been possible to send a copy of the negotiated fee schedule to each member prior to this meeting. However, because of the urgency of the situation, and the short time in which to do it, this was not physically possible. Each of you present has a copy of the schedule in your hands. So that you may have an opportunity to examine it thoroughly, the Board recommends that there be a recess of 20 minutes following the presentation of this report.

As to the attitude of the Board, its members are of the opinion that the negotiators deserve the gratitude of the Society's membership for their valiant efforts on its behalf. Furthermore, that although the fee schedule is not all that some members would like, it is one which the Board believes should be acceptable for a period of 6 months. Your Board, therefore, unhesitatingly recommends that it be adopted and the President and Secretary be authorized to sign a contract terminating June 30, 1957.

If the recommendation of the Board is acceptable to you, a communication with a card on which a physician can indicate his willingness to participate will be forwarded to each member of the Society. Remember, no physician needs to participate in this program unless he wishes to. Upon the Society's decision to participate its members will receive from Medical Service a handbook of instructions, plus a copy of the negotiated fee schedule.

With respect to the operation of the program, there will undoubtedly be many unforeseen complications. As must be obvious to you, this is no small undertaking, but one which will require patience and understanding on the part of all parties to the agreement.

Again, your Board would urge that in the interest of good public relations, and in our own interest, a contract with the Department of Defense be entered into for a 6 months' period, at the end of which time another contract can be negotiated on the basis of the experience that has been gained.

Respectfully submitted,
Wallace M. Yater, M.D., *Chairman*
Ralph M. Caulk, M.D.
Raymond T. Holden, M.D.
W. Ross Morris, M.D.
Preston A. McLendon, M.D.
Herbert P. Ramsey, M.D.
James W. Watts, M.D.
Theodore Wiprud, *Secretary*

# REPORT OF DELEGATES TO THE AMA CLINICAL SESSION*

Your delegates to the House of Delegates' meetings during the Tenth Clinical Meeting of the AMA arrived in Seattle late in the afternoon of November 25 in company with your Secretary. They were very fortunate in the time of their arrival, as their flight was just about the last to land in the area for several days due to one of the heaviest fogs in years which blanketed the entire Pacific Northwest.

At the opening session of the House on November 27, Dr. Edward M. Gans, of Harlowton, Montana, was announced as having been selected as the 1956 General Practitioner of the Year. Dr. Gans is 80 years old and has practiced medicine for 51 years, the last 44 of which have been in the Harlowton area. The presentation was made by Dr. Gunnar Gundersen, Chairman of the Board of Trustees of the AMA, and was accepted, in a strong voice, by Dr. Gans, who, by the way, has two sons practicing medicine but neither in the Harlowton area.

Dr. Dwight H. Murray, President of the AMA, told the opening session that "the medical profession, along with business and industry, is caught between those who desire to promote sound government programs and those who desire even more intensely to perpetuate party politics. Unfortunately, in recent years a benevolent Federal Government appears more attractive to the voting public than the preservation of individual freedoms. Medicine must do its utmost to reverse this trend." [See editorial in this issue of the ANNALS. Ed.]

The Reference Committee on Reports of Officers later recommended that Dr. Murray's address be distributed to officers of constituent societies so that they might use the ideas in it, especially in their contacts with lay groups.

Dr. George F. Lull, Secretary of the AMA, reported a steady increase in membership. As of that date 160,387 physicians were members and there has been a considerable reduction in delinquency in payment of AMA dues.

Dr. Gundersen, in a report on the American Medical Education Foundation, recommended that payments be made directly to the medical schools. He advised the House that the AMA was contributing $125,000 more to the Foundation this year to compensate for payments that would not be forthcoming from the Ford Foundation. To date, this year, the AMA has contributed $225,000 in funds as well as $118,000 in administrative costs, making this year's total contribution $343,000. Further gifts from state medical associations were announced as follows: California, $132,981; New Jersey, $25,000; Utah, $11,870; and Arizona, $3,695.

The proposed revision of the Principles of Medical Ethics was the subject of greatest interest at the meeting. The House of Delegates referred the matter back to the Council on Constitution and By-laws after adopting the report of the Reference Committee, which included the following statements:

> "Careful consideration was given to the Preamble and the 10 sections of the proposed Principles. The Preamble and 7 of the 10 sections appear to be acceptable in their present form.
>
> "Sections 6 and 7 were not acceptable as presented either to the group which appeared at the hearing or to your reference committee.
>
> "Out of the general discussion the reference committee received the crystallized opinion that at least four areas needed more specific attention in Sections 6 and 7. These are:
>
> 1. Division of fees;
> 2. The dispensing of drugs and appliances;
> 3. The corporate practice of medicine;
> 4. Greater emphasis concerning the relationship between physicians and patients.
>
> "In addition, the reference committee felt that the wording in Section 10 could be improved if amended to read as follows:
>
> > 'The responsibilities of the physician extend not only to the individual but also to society and deserve his interest and participation in activities which have as their objective the improvement of the health and welfare of the individual and the community.'
>
> "In view of the above your reference committee believes that the proposed Principles of Medical Ethics should be referred back to the Council on Constitution and By-laws for further study and consideration of the above stated principles.
>
> "In the short space of time at our disposal and in view of the importance of the subject, your reference committee did not deem it wise to attempt to properly phrase these concepts.
>
> "We would also recommend that if possible this study be completed at least six weeks prior to the June session and that the new version be published in *The Journal* in order that all interested physicians might have an opportunity to comment thereon."

### VETERANS' MEDICAL CARE

The House revised AMA policy on veterans' medical care by endorsing in principle the following paragraph suggested by the Council on Medical Service:

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* The Tenth Clinical Session of the American Medical Association was held in Seattle, Wash., November 27-30, 1956.

"With respect to the provision of medical care and hospitalization benefits for veterans in Veterans Administration and other Federal hospitals that new legislation be enacted limiting such care to veterans with peacetime or wartime service whose disabilities or diseases are service-incurred or aggravated."

This action eliminates the temporary exceptions which were made in the June, 1953, policy regarding wartime veterans who are unable to defray the expenses of necessary hospitalization for non-service-connected cases of tuberculosis or psychiatric or neurological disorders. In making the policy change, the House approved this supplementary statement:

"We recognize the laws and administrative extensions of the law that are now in operation. We feel that under the circumstances it will be to the best interests of the public in general, and veterans in particular, if medical societies, county and state as well as national, develop committees to assist in guaranteeing VA hospital admission to service-connected cases. While the present law exists, we should help assure that veterans whose illness constitutes economic disaster will not be displaced by those suffering short-term remediable ills which, at the worst, constitute financial inconvenience."

### Use of Radium in Hospitals

The House rescinded the June, 1951, action, which limited the hospital use of radium and radioactive isotopes to Board-certified radiologists, by approving a new policy statement which says:

"1. In any hospital in which a patient is to receive radium or the products of radium or artificially produced isotopes, there should be a duly appointed Committee on Radium and Artificially Produced Radioisotopes of the hospital professional staff. This committee should include, but not necessarily be limited to, the following qualified physicians: a radiologist, a surgeon, an internist, a gynecologist, a urologist, and a pathologist. This committee should have available such competent consultation of other physicians and scientific personnel as may be required by it. Where this is not practicable, the hospital staff should consult the nearest Committee on Radium and Artificially Produced Radioisotopes.

"2. In any hospital, the use of radium or its products and artificially produced radioactive isotopes for diagnostic or therapeutic purposes shall be restricted to qualified physicians so judged by the Committee on Radium and Artificially Produced Radioisotopes of the professional staff to be adequately trained and competent in their particular use.

"3. It is recommended that procurement, storage, dosimetry control and inventory of all radioactive isotopes for the use of the hospital staff and radiological safety control be centralized, and, where administratively possible, centralization be located in the Department of Radiology.

"4. It is recommended that the Board of Trustees assign to the appropriate council or committee the continuous study of the problems of radiological safety control in the use of radium and its products and artificially produced radioactive isotopes for diagnostic or therapeutic purposes."

### Additional Actions of the House

Other actions of the House included: continuation of the Clinical Meetings of the AMA but with a recommendation that the Board of Trustees consider holding the interim meeting of the House in Chicago; a recommendation that administrators and the staffs of hospitals look upon alcoholism as a medical problem and that after certain procedures alcoholics be admitted to their hospitals for treatment; approval of the report of the Committee on Medical Practice, which was aimed at improving the position of generalists on hospital staffs.

In a number of miscellaneous actions, the House:

Directed the Councils on Pharmacy and Chemistry and on Foods and Nutrition to conduct a joint study of all presently available information concerning the fluoridation of public water supplies and to present a documented report of findings and recommendations at the December, 1957, meeting;

Urged all physicians to participate actively in the formulation of medical policy for prepaid medical care plans which are under physician direction or sponsorship;

Changed the By-laws to extend service membership to reserve officers on extended active duty with the defense forces and the U.S. Public Health Service;

Changed the By-laws relating to transfer of membership so that an active or associate member of the Association who moves his practice to another jurisdiction may continue his AMA membership by applying for membership in the constituent association in his new jurisdiction, subject to a 2-year limit on approval of his application;

Changed the By-laws so that the election of officers may take place at any time on the fourth day of the annual session, instead of being restricted to the afternoon of that day;

Passed a resolution calling for the American Medical Association to join with the American

(*Continued on page 60*)

# COMPREHENSIVE PROGRAM OF GROUP HOSPITALIZATION AND MEDICAL SERVICE

A Comprehensive Program of health protection including coverage for major medical expense was announced, November 27, 1956, by the Honorable Joseph H. Himes, President of Group Hospitalization, Inc., and Dr. Donald Stubbs, President of Medical Service of the District of Columbia.

The program will be available to Federal employees as well as to employees of commercial organizations. In addition to substantial basic benefits, the program will provide up to a maximum amount (usually $10,000) for major medical expense.

The Comprehensive Program is designed to provide protection against the expense that may be incurred in unusually serious and prolonged illnesses as well as against the expense of the less serious and more commonly experienced illnesses.

Following is a digest of the Comprehensive Program of Protection developed by Group Hospitalization and Medical Service of D.C.

## I. Basic Benefits (for subscribers in groups)

A. Basic benefits for hospital services

1. Benefit days

   In Participating Hospitals,* the Basic Coverage offers up to 180 days of hospital care with the following full service benefits, regardless of the hospital's charge, each hospital confinement (except as otherwise noted):

   a. Semi-private room (accommodations for 2, 3 or 4 persons)†
   b. Meals, including special diets
   c. General nursing service
   d. All drugs and medicines listed in the official formularies
   e. First urinalysis and complete blood count
   f. Operating room
   g. Cystoscopic room
   h. Oxygen
   i. Use of equipment (as customarily provided by the hospital) for administering oxygen
   j. Dressings
   k. Plaster casts
   l. Sterile tray service
   m. Intravenous solutions and injections
   n. Sera (except blood and blood plasma)
   o. Analgesic care
   p. Recovery room

2. Renewal of benefit days

   Benefit days will be fully renewed for the same or related conditions when 90 days have elapsed between the patient's last discharge from the hospital and his next hospital admission. They will be renewed without regard for lapse of time if readmission is for a condition unrelated to that of the prior confinement.

3. Private accommodations

   The Basic Coverage will provide a credit of $12 a day toward the charge for a private room.

4. Emergency first aid—outpatient service

   Basic Coverage offers an allowance of up to $10 for outpatient service for (1) emergency first aid within 8 hours after an accident, or (2) use of operating room facilities when an anesthetic is used.

5. Pulmonary tuberculosis—mental or nervous disorders

   Basic Coverage will provide up to 30 days of care in a general hospital for pulmonary tuberculosis and mental or nervous disorders during any 12 consecutive months.

B. Basic benefits for surgical-medical services

Basic Coverage provides benefits for the following services when rendered by Participating Physicians:

1. Surgery

   The treatment (including aftercare in the hospital) of fractured and dislocated bones, and operations that involve cutting or incision and/or suturing of wounds that are necessary for the treatment of a disease or ailment. (Surgery does not include the treatment of sprains, strains, or contusions.)

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* Participating Hospitals where the Service Benefits of Basic Coverage are available:

District of Columbia:
Casualty
Children's
Columbia
Doctors
Emergency
Episcopal
Freedmen's
Garfield
George Washington
Georgetown
Hadley
Hahnemann
Providence
Sibley
Maryland:
Leland
Prince George's
Suburban
Washington Sanitarium
Virginia:
Alexandria
Anderson Orthopedic
Arlington
Circle Terrace

† Charges for semi-private accommodations in this area currently range from $13 to $18 a day, depending upon the hospital to which a participant is admitted.

2. Obstetrics

   Care of miscarriage, ectopic pregnancy or delivery—to subscribers enrolled under the Family Contract. (Prenatal care or postnatal care after discharge from the hospital are not included.)

3. Anesthesia service

   Administration of anesthetics by a physician while the participant is hospitalized and if a surgical or obstetrical service for which benefits are granted under the Basic Coverage is performed.

4. In-hospital medical service

   Visits by a physician for the *medical treatment* of a disease or ailment, such as pneumonia, diabetes, or a heart condition, while the participant is hospitalized as a bed patient. A payment of $5 a visit will be made under the Basic Coverage for a maximum of 177 visits during any continuous period of hospitalization; however, payments are limited to 1 hospital visit a day. Payments begin with the first visit after the third calendar day of the participant's hospitalization and are available through the 180th day of hospitalization.

   Payment will not be made under the Basic Coverage for medical treatment visits by physicians during the period of hospitalization following a surgical or an obstetrical service.

5. Related services

   Group I. Clinical laboratory services, electrocardiograms, basal metabolism examinations, electroencephalograms and electroshock therapy.

   Group II. Radiological services for the treatment of malignant diseases, and diagnostic radiological services.

   Basic benefits for related services are available when the service is performed by a physician *in or out of a hospital* and if the service is directly related to a disease or ailment and not incidental to a physical check-up.

   Under the Basic Coverage, the Plan will pay 75 per cent of the total of the amounts set forth in the then applicable Surgical-Medical Schedule of Fees after deducting $10 for the services in "Group I" rendered by each physician during a calendar year, and after deducting $10 for the services in "Group II" rendered by each physician during a calendar year.

6. Home and office surgery

   Under the Basic Coverage benefits are offered for the following currently specified surgical services when rendered in the home or in the doctor's office: emergency treatment of fractures and dislocations; excision of superficial tumors and cysts outside the body cavities; excision or incision of external thrombosed hemorrhoids; suturing lacerations (up to $15); delivery; nasal polyp removal; chalazion removal; probing tear duct (initial); and circumcision.

7. Income levels

   Except as indicated below and except for noncovered physicians' visits and that portion of the charges for related services for which the Subscriber is responsible, the fees paid by the Plan will be accepted as full payment by Participating Physicians for services rendered under the Surgical-Medical Plan if the Subscriber is:

   a. A single participant and his income for the 12 months preceding the date the service was rendered does not exceed $4,000 a year; or if he is
   b. A family participant and the total *family income* for the 12 months preceding the date the service was rendered does not exceed $6,000 a year.

   When such Subscriber has other coverage or is entitled to recover surgical or medical expenses as a result of a third party's liability, the Participating Physician may make an additional charge to the Subscriber to the extent of such other coverage, but not to exceed his normal charge for the service rendered.

8. Schedule of fees

   Basic Coverage provides surgical fees ranging from $5 to $300 for a single procedure. The amount of the fee depends upon the procedure performed. If the Subscriber's income exceeds the amounts set forth in paragraph 7 above, and if the physician's fee is greater than the total of the amount paid by the Plan, the Subscriber may be charged the difference.

C. Basic benefits for maternity care

1. Hospital services

The Basic Coverage of the Family Contract offers up to $100 toward the hospital's charges for care during any one pregnancy. For cesarean deliveries, miscarriages, and termination of ectopic pregnancies, the basic benefits for hospital services are the same as for non-maternity cases.

2. Physicians' services

The Basic Coverage offers $105 for obstetrical delivery ($85 for physician, $20 for anesthetist); $180 for cesarean section ($150 for physician, $30 for anesthetist); $180 for termination of ectopic pregnancy ($150 for physician, $30 for anesthetist); $40 or $65 for miscarriage ($30 or $50 for physician, $10 or $15 for anesthetist), depending upon the procedure performed. In addition, allowances are provided for X-ray service and pathology, if required.

### LIMITATIONS AND EXLUSIONS (BASIC COVERAGE)

There is a 10-month waiting period during which the benefits of the Basic Coverage are not available for (1) maternity care; (2) tonsillectomies and adenoidectomies; and (3) preëxisting conditions. Persons already enrolled under contracts of Group Hospitalization and Medical Service will receive credit toward this waiting period for the time they have been enrolled.

The Basic Coverage does not provide benefits for: convalescent care or rest cures; services of special nurses or their board; physical therapy; cosmetic or plastic surgery (unless required because of injuries received after the participant enrolls); dental care except oral surgery required as a result of accidental injury; Workmen's Compensation cases; military service-connected disabilities, or any service rendered in Veterans Administration facilities; nor hospitalization for diagnostic purposes.

### II. MAJOR MEDICAL EXPENSE BENEFITS (for subscribers in groups)

A. Maximum benefit

Subscribers and their dependents enrolled under the Comprehensive Program will, in addition to the benefits of their Basic Coverage, be eligible to receive Major Medical benefits up to an agreed upon amount (usually $10,000) for each illness. There is no limit on the number of illnesses for which benefits are available. Benefits are applicable to "covered" charges regardless of where they are incurred.

Benefits are subject to an agreed upon deductible amount (usually $100) and a coinsurance (usually 75 per cent-25 per cent) feature.

B. Charges to which Major Medical benefits are applicable

Major Medical benefits help to pay charges for the following medical services, supplies, and treatment ordered by a physician to the extent that such services are needed for the diagnosis or treatment of an illness:

Hospital care, including all of the usual services. (The maximum charge for private room and board to which Major Medical benefits may apply shall not exceed $20 a day.)
Physicians' visits
Surgery
Anesthesia and administration thereof
Radiology
Physiotherapy
Pathology
Oxygen and administration thereof
Drugs and medicines
Services of private duty nurses
Artificial limbs or eyes
Casts, splints, trusses, braces, or crutches
Rental of wheel chair or hospital-type bed; iron lung or other mechanical equipment for treatment of respiratory paralysis
Local ambulance service to a hospital

C. Benefit period

Benefits for Major Medical Expense will begin when, during a period of 90 days or less, a Subscriber incurs "out-of-pocket" expenses for an illness in excess of the deductible amount. Benefits for Major Medical Expense will cease at the end of a 90-day period during which charges for "covered" expenses incurred for the same illness do not exceed $50. If, within any 90-day period, the Subscriber again incurs "out-of-pocket" expenses in excess of the deductible amount for an illness for which he has previously received Major Medical benefits, he will again be eligible for benefits for that illness up to the unused portion of the agreed upon maximum benefit.

D. Charges to which Major Medical benefits are not applicable

Major Medical benefits are not applicable to charges for which the participant is entitled to "coverage" from other sources or to charges which would not have been incurred if the participant had not been covered by this or similar coverage; dental services or supplies, eye refractions, eyeglasses, or hearing aids unless required because of accidental injury while participant is covered; cosmetic or plastic surgery required because of a preëxisting condition; obstetrical delivery (including cesarean section) and normal prenatal and postnatal care; medical examinations or tests not incidental or necessary to an illness.

Benefits are not applicable to charges incurred for preëxisting conditions of participants who do not enroll when they are first eligible. Benefits are applicable to charges incurred for preëxisting conditions of participants who enroll when they are first eligible; however, if medical care or treatment is received for such condition within 90 days prior to the effective date of coverage, benefits will be available only after a 90-day period has elapsed during which no medical care or treatment is received.

E. Cost

The cost of the Comprehensive Program depends upon the characteristics of each group. Among the factors affecting the cost are age, sex, income of those to be covered, the deductible and coinsurance features and the amount of coverage.

### Who May Apply

Persons who have not reached 65 years of age may apply for the Comprehensive Program if the group at their place of employment meets the enrollment requirements. Dependent children (unmarried and not regularly employed) may be enrolled. They may be protected under the Basic Coverage when they reach the age of 14 days and under the Major Medical Coverage from birth.

## PROFESSIONAL LICENSE FOR PHYSICIANS

The following subsection of Public Law 460, 84th Congress, District of Columbia Revenue Act of 1956, is cited for the Information and guidance of our members:

"(b) *Trade, business, or professional license.* Every person, other than a corporation, who as an individual, sole proprietor, partner, associate, or joint venturer shall engage in or conduct a trade, business, or profession, other than that of registered nurse or practical nurse, in the District of Columbia which is excluded from the imposition of the District of Columbia tax on unincorporated businesses under the definition set forth in Section I of Title VIII of this article, shall apply for and obtain an annual revenue license. Applications for licenses shall be filed with the Assessor prior to December 1st of each year for licenses for the succeeding calendar year upon forms prescribed and furnished by the Assessor, and each application shall be accompanied by a fee of $25. The first calendar year to which this annual revenue license shall be applicable is 1957. Every such person who commences to engage in or conduct a trade, business, or profession, other than that of registered nurse or practical nurse, which is excluded from the imposition of the District of Columbia tax on unincorporated businesses under the definition set forth in Section I of Title VIII of this article, on or after January 1, 1957, shall obtain such a license within 60 days after the date of commencement of such trade, business, or profession in the District of Columbia."

Officials of the District of Columbia Income and Franchise Tax Division have informed the Secretary of the D. C. Medical Society that no specific regulations have been established with regard to the applicability of the Act as related to physicians in partnership practice, licensed physicians performing solely administrative duties, and other exceptional cases. Each application will be reviewed by a Board to determine the applicability of the Act in each case.

# On the Lighter Side

Have you ever considered the notion that flying your own plane was comparable to driving your own car—and just as safe? If you have, then you are a fellow flying enthusiast of Dr. David M. Nolan, who is probably the most "flyingest" doctor in Washington.

Dr. Nolan was introduced into the mysteries of airborne vehicles during his tenure of duty with the United States Air Force Medical Corps in 1944. His appetite for flying increased with such rapidity that exactly 10 years later he was flying his own cub plane to out-of-the-way places where you and I would, of necessity, have to push the old gas buggy many an hour to reach the same destination. As his flying fever rose higher, so did his plane; as his hours in the air expanded, so did his range of flying. Now, Dr. Nolan thinks of flying where you and I think of driving; and parking to him means any convenient landing field, where to us it means a metered space by the curb. Miles he measures in minutes, and vistas to him are green fields, winding ribbons of rivers, and the timeless mountains with their purple shadows intermingled with glorious sunsets. In the sunshine of day the cities and towns are clusters of Christmas gardens, but at night they light up with a million candles to act as a beacon landmark to chart the way home.

Dr. Nolan is encouraging. He says that regardless of age anyone can learn to fly the contraptions after only 8 hours of professional instruction. First, you must learn the basics of flying, and soon you are taking off, circling overhead and landing with ease. Once the basics are second nature to your reflexes the rest comes easy. However, before flapping your wings on a trip you must know how to plan carefully: first, where you are going; second, how you are going to get there. You must know how to watch for the big landmarks like cities, towns, rivers and bays. You must store this information in the rumble seat of your cranium in order to have a successful return trip, because if you miss your landmarks while flying the Piper, or the Cessna, or a similar small plane, you are lost—lost—lost!

Dr. Nolan will tell you of a hair-raising experience he had soon after he had acquired his own little plane. He decided, one clear day, to take two of his children up to Lancaster, Pennsylvania, to visit a third child who was in school there. This was to be a happy lark for all the children and a routine flying trip for Dr. Nolan. He was sure that he knew the landmarks, but somewhere outside of Washington the pixie winds must have pushed him too far off his course, because before he realized it, his frantic search for a familiar landmark went unrewarded. Even such a comforting landmark as Baltimore was nowhere in sight. Dr. Nolan did see a large body of water, therefore he relaxed thinking it was the Chesapeake Bay. Now, he reasoned, I'll fly along the shoreline until I see Baltimore and then I will know exactly where I am. What Dr. Nolan didn't know was that he was cruising over the shoreline of the Delaware Bay and was totally lost. When Baltimore was nowhere to be found, Dr. Nolan became alarmed because he did not have the foggiest idea where he was up there in the blue. He switched on his radio and asked for instructions as to his whereabouts, but no comforting voice came through those dead, cold earphones. In desperation, he switched over to the emergency radio beam and asked for help. This time the Army radar at Baltimore came in and gave him a crumb of encouragement. "We have you on our radar screen and you are now flying over the Eastern Shore of Maryland." They gave him directions to the nearest landing field where he sat down with a near-empty gas tank.

*Dr. Nolan at Controls of His Piper Cub*

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several months. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| September 23 | Dr. David O. Smith | Cancer | Young Adult Group, Church of the Pilgrims |
| October 4 | Dr. Cyril A. Schulman | Cancer | Women's Club, Sixth Presbyterian Church |
| October 11 | Dr. I. Phillips Frohman | Discussion of film, "Breast Self-examination" | Atlantic Theater |
| October 23 | Dr. Cyril A. Schulman | Cancer | Acacia Lodge |
| November 1 | Dr. Lois I. Platt | Discussion of film, "Breast Self-examination" | Georgetown Theater |
| November 13 | Dr. Julius Schreiber | Emotional Problems in Dating and Courtship | Hillel Forum George Washington University |
| November 14 | Dr. S. George Anagnos | Cancer | Ladies Aid Society, St. Sophia Greek Orthodox Church |
| November 15 | Dr. Winfred Overholser | Panelist, "The Causes of Crime" | Corrections Section, United Community Services |
| November 18 | Dr. Julius Schreiber | Emotional Factors in Marital Conflicts | B'Nai Israel Congregation |
| November 20 | Dr. Julius Schreiber | Parents and Teen-agers | Wheaton High School (Montgomery County, Md.) Parent-Teachers Association |
| November 20 | Dr. Benjamin Karpman | The Happy Family | Parents Group, Meridian Hill Coöperative Nursery School |
| November 26 | Dr. Julius Schreiber | The Emotionally Healthy Family | Temple Emanuel (Montgomery County, Md.) |
| November 27 | Dr. Cyril A. Schulman | Cancer in Women | Wives Auxiliary, Acacia Lodge |
| December 4 | Dr. Julius Schreiber | The Emotional Needs of Children | Rock Creek (Montgomery County, Md.) Parent-Teachers Association |
| December 5 | Dr. Winfred Overholser | Mental Illness | Rotary Club |
| December 6 | Dr. Maxwell Boverman | Happiness Pills—a Critique | Washington Chapter, Alpha Zeta Omega |

He missed the visit to his son in Lancaster that day, but, as Dr. Nolan explained, "The landview from upstairs is somewhat different from what we would expect from our everyday driving experience." However, from his enthusiasm, we can gather that finding your landmarks from the sky gets to be just as conventional as looking for the route signs along the highway while driving your car. And, he says, you can land on any flying field without prior permission, just as you can park your car in any available parking space.

Dr. Nolan summed it up succinctly. It is the careful person who pays attention to details who will become the successful pilot. You dispel the aura of mystery that surrounds flying as soon as you learn the basics. It is exactly like driving your own

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car; the only difference is there isn't much traffic up there.

Golfing note: At a recent match play golf championship tournament at Woodmont Country Club, local, capable ophthalmologist Dr. Bernard Gurwin was runner-up in Class C. Dr. Arthur Lewis won the Class D golf match play championship in the same tournament.

Chuckle note: According to a good many sensible people, fishing is a jerk at one end of a line waiting for a jerk at the other. . . . Breathes there a man with soul so dead who has never turned his head and said, "Wow! Not bad."

J. Earl Kadan, M.D.

## MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, December 4, 1956, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

*Active Members*

J. Robert Andrews, National Institutes of Health
William E. Beaven, 1239 28th Street, N.W.
Philip Bloemsma, 5911 16th Street, N.W.
John A. Bowler, Jr., 1830 Jefferson Place, N.W.
Harry N. Carlton, 1816 R Street, N.W.
C. Barrie Cook, 119 Stratford Avenue, Fairfax, Va.
Norman W. Harris, Jr., 1628 S Street, N.W.
Catharine Knop, 1801 K Street, N.W.
Edward I. Kushner, 3210 Wisconsin Avenue, N.W.
Robert D. Lincoln, 3000 Connecticut Avenue, N.W.
Eleanor L. Long, 2120 16th Street, N.W.
James C. Mandes, 1801 K Street, N.W.
Jane B. McKewen, 705 18th Street, N.W.
Robert H. Parrott, 2125 13th Street, N.W.
Abraham Ruchwarger, St. Elizabeths Hospital
Irwin Siegel, Washington Clinic
Richard A. Steinbach, Georgetown University Hospital

*Associate Members*

Ida Djung, D. C. General Hospital
Ai Ding Fang, 216 N. Fairfax Street, Alexandria, Va.
Timothy L. Kelly, Jr., 1222 S. Buchanan Street, Arlington, Va.
Murray Paul, 1901 Erie Street, Hyattsville, Md.
Bennett A. Robin, 8723 Piney Branch Road, Silver Spring, Md.
Theodore A. Thorson, 5521 Hoover Street, Bethesda, Md.

*Resident-Intern Members*

Robert J. McAllister, 4308 New Hampshire Avenue, N.W.
John C. Rhoads, 2971 S. Columbus Street, Arlington, Va.

The following applicants for membership will be voted on at the meeting of the Executive Board, February 25, 1957.

*For Active Membership*

Gerald L. Casebolt, College of Medical Evangelists—1948
Eugene A. Clark, Jr., Howard University—1948
Thomas F. Cullen, Georgetown University—1955
Royce E. House, Baylor University—1940
Charles S. Ireland, Howard University—1945
Philip R. James, Georgetown University—1948
Margaret M. Kenrick, New York Medical College—1952
Stanley J. Klyza, University of Chicago—1938
Sanford L. Leikin, University of Louisville—1947
Joseph M. LoPresti, Georgetown University—1945
William B. Reed, Columbia University—1952
James G. Shea, Georgetown University—1952
Donald C. Wilansky, Dalhousie University Faculty of Medicine, Halifax, N. S.—1951

*For Associate Membership*

Walter L. Nalls, Medical College of Virginia—1932
William C. Weintraub, Jefferson Medical College—1953
Raymond O. West, College of Medical Evangelists—1951
David C. Wherry, George Washington University—1952
Robert K. Wineland, George Washington University—1951

### One New Life Member

Chapter II, Article IV, of the Constitution of the Society, reads as follows:

> Life members shall be active members who have been active members for a total of forty years. They shall have all of the privileges of active membership, and shall be exempt from paying dues and assessments.

Our honor roll now numbers 66. The congratulations of the Society are extended to Dr. E. Clarence Rice (seniority no. 685; date of membership, January 3, 1917), who has for forty years been on the roster, meeting all dues and assessments and lending his support to the Society by frequent attendance. His status is now elevated to Life membership.

BOSTON MEDICAL

# News and Personals

## MEETINGS—Past and Future

**The Section on Gastroenterology** will sponsor a joint meeting with the Medical Society of the District of Columbia, to be held in the Society's auditorium, Monday, February 4, at 8:30 p.m. The guest speaker will be Dr. Gordon McNeer, Assistant Professor of Clinical Surgery, Cornell University Medical College.

A dinner at the Mayflower Hotel, in honor of the speaker, will precede the meeting.

**The Medical Society's Sixth Midwinter Seminar** will be held on the evenings of February 19, 20 and 21, beginning at 8 p.m., in the Medical Society's auditorium. The Program Committee, under the chairmanship of Dr. William B. Walsh, has arranged an excellent program, which appears in full on pages 33 and 34 of this issue.

**The Armed Forces Institute of Pathology, Walter Reed Army Medical Center,** will conduct two postgraduate courses in specialized pathology in March. They will be:

March 18–22: "Pathology of the Oral Lesions"
March 25–29: "Ophthalmic Pathology"

Applications from Navy Medical Department officers on active or inactive duty will be forwarded to the Chief of the Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D. C., 6 weeks prior to the opening date of the course. Priority will be given to officers who are Board-certified, Board-qualified, or residents in a specialty related to the course desired.

**The Section on Neurology and Psychiatry** met in the Medical Society's library, December 13. The following program was presented:

"A Clinical Test for Sound Localization and Its Application," Drs. Louis Sanchez-Longo, Francis M. Forster, and Thomas L. Auth. Discussant: Dr. Robert Galambos.

"Cerebral Cysticercosis—A Case Report," Drs. A. Portera, J. Green, Stacy L. Rollins, Jr., and Desmond S. O'Doherty.

The newly organized **Washington Academy of Neurological Surgery** held its first fall dinner meeting, November 20, at the Cosmos Club. Dr. Hubert L. Rosomoff, of the Naval Research Laboratory, addressed the members on "Hypothermia."

Dr. William T. Spence is President of the Academy, and Dr. Jonathan M. Williams, Secretary-Treasurer.

**The Washington Psychiatric Society** met conjointly with the Medical Society of St. Elizabeths Hospital and The Washington Psychoanalytic Society, November 30, in the Medical Society's auditorium. Dr. Frieda Fromm-Reichmann, Consultant in Psychotherapy to Chestnut Lodge, was the speaker. Her subject was "Experiences as a Fellow of the Center for Advanced Study in the Behavioral Sciences (Stanford, California)."

**Dr. Lawrence A. Rapee** addressed the **D. C. Chapter of the American Academy of General Practice,** which met in the Medical Society's library, December 18. The program was devoted to a discussion of diabetes.

**The Georgetown Clinical Society** observed its 50th Anniversary with a dinner in the Williamsburg Room of the Mayflower Hotel, November 20. Over 100 members were present. The principal speaker for the occasion was the Very Reverend Edward B. Bunn, S.J., President of Georgetown University, who was also the guest of honor.

The Clinical Society was organized in 1906 to bring together socially District alumni of Georgetown University School of Medicine and to provide them the opportunity of presenting scientific papers before their colleagues.

Dr. Raymond A. Osbourn, President of the Society, presided as toastmaster and presented Father Bunn with a check for $500 as a donation from the Society to Georgetown, the contribution to be credited to the American Medical Education Foundation.

Among those present at the dinner were Dr. Joseph J. Mundell, Professor Emeritus of Obstetrics at Georgetown, one of the 10 graduates who founded the Society in 1906; Dr. James A. Gannon, who joined the Society in the year of its founding; and 15 Past Presidents of the organization.

In charge of the Committee on Arrangements were Drs. David M. Nolan and Stephen M. Nealon.

## GENERAL NEWS

**The Executive Board of the Medical Society of the District of Columbia,** in regular session, December 4, 1956, voted to accept the invitation of the United States Chamber of Commerce to become a "professional member," dues for which are $100 per year.

The Board accepted with thanks a framed photograph of Dr. Benjamin Schenkmyer Bohrer (1788–1862) from Mrs. Henry C. Hallam, 3000 Tilden Street, N.W. Dr. Bohrer was the great granduncle of Mrs. Hallam. A charter member of the Medical Society and a leading physician in his time, he served as personal physician to President Jackson. He gave able support to the plan to establish an insane asylum in the District of Columbia.

Dr. Leroy E. Burney, recently appointed Surgeon General of the Public Health Service, was recommended for election to Honorary membership in the Medical Society.

The Board approved the action of the Committee on Industrial Health that Dr. Josephine J. Buchanan be recommended for a citation for meritorious service by the President's Committee on Employment of the Physically Handicapped.

At the request of the Washington Academy of Sciences for a nominee for Vice President, the Board voted to submit the name of Dr. Frederick O. Coe to succeed himself in that office.

The Washington Home for Foundlings, in a communication to the Society's Secretary, advised of the resignation of Dr. William S. Anderson as Medical Director of the Home and requested the recommendation of a successor. Dr. Hugh G. Clark was recommended for appointment as Medical Director of the Home.

Construction of a new **Laurel** (Md.) **General Hospital** was begun early in December. The new hospital is the culmination of hopes of two brothers, Dr. Bryan P. Warren, president of the corporation financing the institution, and Dr. John M. Warren, an Associate member of the District Medical Society. The hospital will be attached to the clinic which is operated by the two physicians. In 1941 they opened a 15-bed hospital to take care of the babies of GI's living in Laurel during the War; it continued in operation for 12 years. The new building, which will cost $111,000, is being financed by a $50,000 loan and sale of stock.

**Children's Hospital** will receive a grant of $144,625 from the Public Health Service, the money to be used to increase research activities and to improve the diagnosis and treatment of pediatric diseases. It will allow for a sixth floor addition to the existing building and for a third floor addition to the planned new building. The grant was one of 73 approved by the Surgeon General upon the recommendation of the National Advisory Council on Health Research Facilities.

**The Mental Health Study Center** has moved its offices from Ritchie Coliseum, College Park, to 1000–1002 Lebanon Street, Langley Park, Silver Spring, Maryland. This Center is affiliated with the National Institute of Mental Health, PHS. Office hours are Monday through Friday, 8:30 a.m. to 5:00 p.m. The telephone number is Hemlock 4-2100.

**Dr. Leroy E. Burney,** Surgeon General of the Public Health Service, gave the **Twelfth Annual**

**Founders Lecture,** sponsored by the Medico-Chirurgical Society of D. C., before students and faculty of Howard University Medical School, November 13. The subject of his address was "New Tasks for Modern Medicine."

The name of The Children's Convalescent Home at 1731 Bunker Hill Road, N.E., has been changed to **The Children's Convalescent Hospital.** The program, purpose, and operation of the Hospital will remain the same as under the previous name.

The District of Columbia is one of 27 areas throughout the United States in which a panel of doctors is participating in the **National Disease and Therapeutic Index.** This program was described in the August, 1956 issue of the MEDICAL ANNALS. **Dr. Lawrence S. Lilienfield,** an Associate member of the Medical Society, is Coördinator for the District of Columbia.

**Dr. W. A. Newman Dorland** died, September 11, 1956, at the Veterans Administration Hospital in Bay Pines, Florida. An eminent obstetrician and gynecologist, Dr. Dorland was probably best known as the editor of the American Illustrated Medical Dictionary. The "Dorland Dictionary," as it is known to countless medical workers, has gone through 22 editions, the last one appearing in 1951. The twenty-third edition of the Dictionary is scheduled to appear early this year.

## PERSONALS

The D. C. Division of the American Cancer Society continued its popular **Cancer-Answer Program** during the fall months. Telephone questions on cancer from laymen were answered by physicians between 7 and 8 p.m. on Monday evenings, October 8 through December 3. Members of the Medical Society who provided answers were: Drs. Herbert Giffin, Calvin T. Klopp, Benedict J. Duffy, Jr., Jack E. White, E. Osmun Barr, Gilbert Ottenberg, and Frederick B. Hartsock. Dr. John Potter, of the staff of Georgetown Hospital, answered questions on December 3, and the calls on November 12, which was D. C. Day for the Medical Society, were handled by a staff member of the Cancer Society.

**Dr. James W. Watts** visited the Dominican Republic early in November and took part in a Postgraduate Symposium on Surgery at the University of Santo Domingo, sponsored by the International College of Surgeons. He was chairman of a program devoted to neurosurgery, gave a series of lectures, presented some colored motion picture films with Spanish narratives, saw many patients in consultation, and performed some neurosurgical operations, one of which was televised. Because of the distinguished service rendered to his country by Dr. Watts and other American surgeons in presenting this Symposium, the President of the Republic conferred upon each one the Order of Duarte, Sanchez y Mella. This decoration carries with it the rank of Commander.

**Dr. Theodore Winship,** pathologist at Garfield Memorial Hospital, returned early in November from a 5 weeks' trip through Europe and the Middle East. He gave 10 lectures at the University of Teheran, in Iran, and in London he addressed the London Thyroid Club.

Dr. Winship combined his lecture tour with a visit to his brother in Saudi Arabia, who took him on a tour of the interior as far as Hofhuf, the oldest town in Arabia, which has no white population. Other interesting cities Dr. Winship visited were Istanbul, Baghdad, Isfahan, Athens and Munich.

**Dr. J. Winthrop Peabody, Sr.,** who is Chairman of the Council on Postgraduate Medical Education of the American College of Chest Physicians, moderated two sessions in the Postgraduate Course on Diseases of the Chest sponsored by the College at Vanderbilt University School of Medicine, Nashville, Tenn., January 14–19.

**Dr. J. Winthrop Peabody, Jr.,** Instructor in Thoracic Surgery at Georgetown University School of Medicine, participated in a Symposium on Pulmonary Mycoses, January 17. His special topic was "Nocardiosis."

**Dr. Daniel Leo Finucane** will take over the direction of the District of Columbia Health Department on February 1, succeeding Dr. Daniel L. Seckinger, who will retire, January 31.

Dr. Finucane, who has been Superintendent and Medical Director of Glenn Dale Sanatorium since 1939, is well qualified for the post. A graduate of Georgetown University School of Medicine (1927), he has taken postgraduate study at the Trudeau School for Tuberculosis, The University of Minnesota, Mayo Clinic, and the D. C. General Hospital. He also has had special training at the School of Hospital Administrators under the American Hospital Association in Chicago.

He first went to Glenn Dale in 1934 as Superintendent of the Children's Tuberculosis Sanatorium. He became Assistant Superintendent of Glenn Dale in 1937, and in 1939 was appointed Superintendent and Medical Director.

Dr. Finucane has been on the teaching staff of Georgetown University since 1930, as Assistant Clinical Professor of Medicine from 1933 to 1939, and as Clinical Professor of Medicine from 1939 to date.

He is a Fellow of the American College of Physicians and a member of the American Medical Association, American College of Chest Physicians, and the American Trudeau Society. He became affiliated with the D. C. Medical Society in 1939. He is President of the Trudeau Society of Washington and Past President of the Potomac Chapter of the American College of Chest Physicians.

The District Commissioners were assisted in making their choice of a successor to Dr. Seckinger by a number of leaders in the fields of medicine and dentistry. They included Dr. Ralph M. Caulk, President of the District Medical Society; Dr. W. Montague Cobb and Dr. Montgomery Blair, Chairman and Vice Chairman, respectively, of the Commissioners' Public Health Advisory Council; representatives of the three medical schools, Dr. Hugh H. Hussey (Georgetown University), Dr. Ralph G. Beachley (George Washington University), and Dean Robert S. Jason (Howard University); and Dr. Paul B. Cornely, representing the United Community Services.

DANIEL L. FINUCANE, M.D.
*District Director of Public Health*

**Dr. David H. Kushner** attended the 5th Annual Clinical Meeting of the American College of Obstetricians and Gynecologists in Chicago, November 7–9. He headed a round table discussion on "Puerperal Psychosis" and led a breakfast conference on obstetrical anesthesia.

**Dr. James W. Watts** has been cited by the President's Committee on Employment of the Physically Handicapped for Meritorious and Outstanding Service. The Citation was given to him by Mr. J. Harvey Daly, Chairman of the District Commissioners' Committee on Employment of the Physically Handicapped. In accepting the award, Dr. Watts expressed appreciation for the recognition thus given to neurosurgery in the field of rehabilitation.

**Dr. Zigmond M. Lebensohn,** Chairman of the Medical Society's Committee on Mental Health, represented the Society at the Third Annual Conference of Mental Health Representatives of State Medical Associations, held in Chicago, November 16–17. The meeting was sponsored by the Council on Mental Health of the AMA. Dr. Lebensohn was appointed Recorder-Reporter of a study group which considered the topic, "Use of Hypnosis in Medical Practice."

**Dr. Edward J. Stieglitz** addressed the Third Annual Merrell Symposium on Constructive Medicine in Aging, sponsored by the William S. Merrell Company, at the Netherland Hilton Hotel in Cincinnati, January 17. Dr. Stieglitz spoke on "Integrated Unity of the Patient."

**Dr. Winfred Overholser,** Superintendent of St. Elizabeths Hospital, addressed members of the National Association for Mental Health at the opening session of their Sixth Annual Meeting, November 29, at the Sheraton Park Hotel, Washington. The three-day meeting ended on December 1 with a banquet, when Dr. William C. Menninger, of the Menninger Clinic, Topeka, Kansas, was the speaker.

**Dr. Addison M. Duval,** Assistant Superintendent of St. Elizabeths Hospital, is the new Chairman of the D. C. Commissioners' Youth Council. He replaces Mrs. Henry Grattan Doyle, who has served as chairman since the Council was organized 3 years ago.

**Dr. James G. Shea** has succeeded Dr. Lawrence Phillips as Chief Medical Officer of the Emergency and Admitting Service of the District of Columbia General Hospital. Dr. Phillips recently resigned from the post to enter the private practice of medicine. Dr. Shea, who graduated from Georgetown University in 1952, has spent the past four years at the Hospital as intern and resident physician.

**Dr. Bela Gondos,** Chief of the Department of Radiology, D. C. General Hospital, presented a scientific exhibit at the Annual Meeting of the Radiological Society of North America in Chicago, December 2–7. The title of the exhibit was "Physiological and Pathological Rotation of the Kidney."

At the Annual Meeting of the Prevention of Blindness Society of Metropolitan Washington, December 6, at the Shoreham Hotel, **Drs. Dan G. Albert and Joseph Dessoff** were elected to the Society's Board of Trustees.

The American Diabetes Association has appointed **Dr. DeWitt E. DeLawter,** an Affiliate member of the Medical Society, to serve as Governor for the District of Columbia during 1956–57.

**Dr. Milton C. Cobey** was elected Chairman of the Orthopedic and Traumatic Surgery Section of the Southern Medical Association at its November meeting in Washington.

**Dr. Everett J. Gordon** recently addressed the Graduate School of Law at Georgetown University on "Orthopedic Aspects of Medical-Legal Problems."

**Dr. Robert U. Cooper** has been elected Chairman of the Eastern Branch YMCA at 1611 - 17th Street, S.E.

**Dr. Daniel L. Seckinger,** retiring Director of the District of Columbia Department of Public Health, was given a testimonial luncheon by the Metropolitan Health Officers' Association at the Washington Golf and Country Club, December 7.

Dr. Seckinger was recently given an honorary life membership in the Conference of State and Provincial Health Authorities of North America. This honor has been conferred upon only 32 "deans" in the public health field. Dr. Seckinger accepted the membership certificate at a banquet in Atlantic City, November 11.

**Dr. Watson W. Eldridge** was guest of honor at a dinner given by his colleagues at the Oakcrest Country Club, November 19. Dr. Eldridge has retired, after a long association, from the staff of St. Elizabeths Hospital and plans to live in Florida. Dr. Addison M. Duval was in charge of arrangements for the dinner.

**Dr. Wendell A. Parker and Dr. Richard L. Siggers** have transferred from Active to Associate membership. Dr. Parker's address is 2060 East Ninth Street, Cleveland 15, Ohio. Dr. Siggers is establishing a practice in Ceres, California. His offices are in the Ceres Medical and Dental Building.

**Dr. Raymond Stoller** has resigned from the Medical Society because of his removal to Detroit, Michigan. His address is 25210 Grand River Avenue, Detroit 19, Michigan.

# BOOK REVIEWS

**The Office Assistant in Medical or Dental Practice.** PORTIA M. FREDERICK, Instructor, Medical Office Assisting, Long Beach City College, AND CAROL TOWNER, Executive Assistant, Department of Public Relations, American Medical Association. Price, $4.75. Pp. 351, with 55 illustrations. Philadelphia: Saunders, 1956.

A physician's office assistant must be very versatile. She serves as nurse, receptionist, stenographer, bookkeeper, cashier, record-keeper, librarian, housekeeper, and social secretary. She is expected to carry out all of these tasks with a high degree of accuracy, and at the same time remain cheerful, sympathetic, tactful, polite and friendly to a succession of people every day.

A girl venturing into such a career is likely to have had training as a nurse, or as a secretary, but rarely as both, and even more rarely has she had any inkling of the nature of her many other responsibilities. Training a new "Girl Friday" is enough to send shudders down the spine of the most amiable physician. But it has to be done, sometimes repeatedly: office assistants are always getting married, or raising families, or venturing off to Cambodia or Greenland in search of adventure.

"The Office Assistant" by Portia M. Frederick and Carol Towner is designed both as a text for classroom training of medical assistants, and for on-the-job education of girls already holding such posts. The volume is of particular interest to practicing physicians for the latter purpose. Many hours of lecturing a new girl can be saved by providing her with a book of this sort. It is full of very sensible, very practical and, at times, ingenious suggestions for handling the many situations which arise in a medical practice.

The volume does seem to cover this very wide field extremely well, and the information and suggestions are presented clearly and briefly, from the cheerful telephone arrangement of the first appointment for the new patient to the last collection letter before the account is referred to the collection agency. It should be very useful in any office, even for the experienced office assistant, who might well discover short-cuts or superior technics in this attractive volume.

PEARL B. HOLLY, M.D.

**Health for the American People.** A Symposium presented Monday, November 21, 1955, at the Centennial Celebration of the Massachusetts Memorial Hospitals. Price, $1.00. Pp. 105. Boston: Little, 1956.

This small book is a report of the proceedings of a symposium stating the positions of some 21 experts on the pressing problems of organization and distribution of medical care and methods of paying for it. It presents without passion, which is refreshing in itself these days, the views of well-known leaders in American thought on obtaining and providing medical care. These experts have a broad national experience in diversified disciplines, such as medicine, law, insurance, management, labor, etc. The occasion for the symposium was the recently held Centennial Celebration of the Massachusetts Hospitals. No doubt the significance of this occasion in American medical history led to obtaining an illustrious group of discussants and the excellence of their presentations in three panels: organization of health services, paying for health services, and community action for health.

The book is recommended for physicians and laymen interested in informing themselves of the current thought concerning the pressing problems of medical care programs. It is particularly recommended for those who are participating in the development and economics of health and sickness insurance plans, Blue Cross and Blue Shield, and group and individual practice.

S. ROSS TAGGART, M.D.

**Williams Obstetrics,** 11th edition. NICHOLSON J. EASTMAN, M.D., Professor of Obstetrics, Johns Hopkins University, and Obstetrician-in-Chief to the Johns Hopkins Hospital. Price, $14.00. Pp. 1212, illustrated. New York: Appleton, 1956.

This book is one of the standard textbooks used in many medical schools and is considered to be an authoritative reference work for both the general practitioner and specialist.

This eleventh edition has many new features which bring it up to date on current thoughts and practices in obstetrics. The subjects of fibrinogenopenia, shock, the hypotensive drugs, and the use of trichlorethylene, normorphine and the adrenocortical hormones have been given careful study and consideration.

Of all the new features in this edition, I think the one on the Psychiatic Aspects of Pregnancy and Childbirth (by Dr. Leo Kanner) is by far the most important and best presented. In simple terms and literate style, he gives us the current psychiatric knowledge about the emotional problems which beset many pregnant women, without taking off on the wings of the psycho-analytic flying machine, leaving us behind and confused.

My only criticism of this excellent work is that since it is intended not only for medical students but as a standard reference book for all practitioners of obstetrics, a larger amount of space should be given to operative obstetrics. Use of forceps, breech deliveries, external and internal version, cesarian sections and destructive operations, and the technics employed on all these procedures are covered in a scant 76 pages. I feel a more detailed and enlarged section is indicated for this important part of obstetrics, for those in practice.

JOSEPH B. SHEFFERY, M.D.

**Rosenau Preventive Medicine and Public Health,** 8th edition. KENNETH F. MAXCY, M.D., DR.P.H., Professor Emeritus of Epidemiology, The Johns Hopkins University, School of Hygiene and Public Health, with 27 contributing authors. Price, $15.00. Pp. 1465, illustrated. New York: Appleton, 1956.

Dr. Kenneth Maxcy and his 27 collaborators in 1951 made a significant contribution to the field of preventive medicine and public health when they practically rewrote this monumental public health classic, which was first published in 1913 by one of the giants of the field, Dr. Milton J. Rosenau, long associated with the Harvard Schools of Medicine and of Public Health and last edited by him in 1931. This eighth edition therefore marks the second effort of this same group.

A careful comparison of the eighth with the seventh edition shows that there have been upward of 60 or more significant revisions. For the first time in almost 45 years the title of the book has been changed from Preventive Medicine and Hygiene to Preventive Medicine and Public Health. This is in conformity with present usage and terminology. A large group of statistical tables and charts throughout the text have been brought up current with the most recent reports. A number of sections have been partially or completely rewritten and include, among many, such items as laboratory methods in mumps, poliomyelitis immunization and control, trench fever, control of psittacosis, tuberculosis, snake poisoning, organic insecticides, and ionizing radiation. There are several new additions, such as coxsackie virus infections, treatment of brucellosis, discussion of UNICEF and Public Law 165 liberalizing and extending the vocational rehabilitation acts. The rewriting and new additions have not materially increased the size of the book since the number of pages are the same as in the previous edition.

The eighth revision continues to keep this book in the forefront as a textbook for professional students and as a reference for all individuals directly or indirectly participating in community health activities. The major deficiencies are its inadequate handling of trends in the organization and provision of medical care and its failure to devote more of its chapters to the responsibilities of the private physician in community health.

PAUL B. CORNELY, M.D.

**Dermatology.** DONALD M. PILLSBURY, M.A., D.Sc. (HON.), M.D., Professor and Director of Department of Dermatology, University of Pennsylvania School of Medicine; Onetime Chairman, Subcommittee on the Cutaneous System and Member of the Committee on Medicine and Surgery, National Research Council; Member of National Advisory Health Council, United States Public Health Service; Director, Commission on Cutaneous Diseases, Armed Forces Epidemiological Board; WALTER B. SHELLEY, M.D., PH.D., Associate Professor of Dermatology, University of Pennsylvania School of Medicine; Chief of Dermatology Clinic, Hospital of the University of Pennsylvania; Member, Subcommittee on the Cutaneous System, National Research Council; Area Consultant, Dermatology, Veterans Administration; AND ALBERT M. KLIGMAN, M.D., PH.D., Associate Professor of Dermatology, University of Pennsylvania School of Medicine; Associate Professor of Dermatology, University of Pennsylvania Graduate School of Medicine. Price, $20.00. Pp. 1331, with 564 figures. Philadelphia: Saunders, 1956.

It is usually customary for anyone reviewing a book to comment favorably, but, honestly, this book is good. Its style is something different. It is easy to read.

The first section dealing with the physiology of the skin and its appendages is something that should be reviewed by every student of medicine, graduate or undergraduate. The manner in which the various skin diseases are presented in regard to their manifestations in various areas and their relationship to internal disorders makes the text easy as a reference. The section on psychocutaneous medicine definitely simplifies this method of approach but at the same time brings out the importance of this phase of dermatological practice.

The illustrations are excellent and properly placed. The authors have accomplished something which is too seldom done in most textbooks, namely, the omission of the statements of previous writers in years gone by which are no longer of practical value.

E. E. BARKSDALE, M.D.

**Ciba Foundation Colloquia on Ageing. Volume 2. Ageing in Transient Tissues.** G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.CH., AND ELAINE C. P. MILLAR, A.H.W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $6.75. Pp. 263, with 96 illustrations. Boston: Little, 1956.

This book is a valuable contribution to the scientific literature on the Biology of Ageing. It is the result of a colloquium organized in 1955 under the auspices of The Ciba Foundation, London. It is the second volume of a series dealing with problems of ageing. (The first volume was titled "General Aspects of Ageing.")

The term "transient tissues" simply means tissues whose life is shorter than that of the organism as a whole. Those discussed in this colloquium are rat Woolfian ducts, human ovarian and testicular tissues, placenta, deer antlers, apocrine sweat glands, plant leaves, and human red cells.

The participants are outstanding scientists principally drawn from the United States, England, and France. All are active scientists dealing with the specific data which they presented for general discussion.

The reader is made acutely aware of the present difficulties of ageing research when an effort is made to define "ageing." This effort, like previous ones, simply succeeds in making us aware of the mercurial elusiveness with which ageing defies definition in conventional terms. Perhaps ageing, which is so closely related to the passage of time, cannot be defined in static terms any more successfully than time itself. It was only after Einstein had shown the relativity of time that men ceased trying to define it in the static terms of the less sophisticated pre-Einstein period. Perhaps the fact that almost every paper in this series attempts to relate the tissue changes described to endocrine control mechanisms is a reflection of a similar shift taking place in the science of ageing. Most earlier symposia on ageing in tissues, which this reviewer can recall, have dealt with static descriptions of tissues rather than with the dynamics of change. J. E. Lovelock's discussion of "The physical instability of human red cells and its possible importance in their senescence" was an especially interesting paper for this reader.

The discussions following each paper are keen, critical and stimulating.

Joseph W. Still, M.D.

## LeROY WALTER HYDE, M.D.

### (1890–1956)

Dr. LeRoy W. Hyde, retired ophthalmologist, died November 22, 1956, at Garfield Memorial Hospital. His offices before his retirement in 1950 were at 1801 Eye Street, N.W. His home was at 4801 Connecticut Avenue, N.W.

Dr. Hyde, a native of Beekmantown, N. Y., was born August 4, 1890. He graduated in medicine from the University of Virginia at Charlottesville in 1916 and interned at the University Hospital in University, Virginia. He served as First Lieutenant in the Medical Corps of the U.S. Army during World War I with a hospital unit made up of medical men from the University of Virginia. He was stationed in France from July, 1918, to April, 1919.

He began practicing medicine in Washington in 1920. During his active years he was Chief of the Ophthalmological Service at Garfield Hospital. He had served on the staff of the Episcopal Eye, Ear and Throat Hospital, where he had earlier received special training in his field, and he had been a member of the consulting staff of Children's Hospital. During World War II he served on the Medical Advisory Committee to Selective Service.

Dr. Hyde was a charter member of the Osler Society. He was a member of the American Medical Association, an Active member of the Medical Society since 1925, and a member of two medical fraternities, Nu Sigma Nu and Sigma Nu.

Surviving him are his wife, Mrs. Elizabeth K. Hyde, of the home address, and a sister, Mrs. Francis D. Ross, of Arkadelphia, Arkansas.

## HOMER KIRK BUTLER, PHAR. D., M.D.

### (1889–1956)

Dr. Homer Kirk Butler, who practiced medicine for many years in Southeast Washington, died November 10, 1956, in a Baltimore nursing home. He had been seriously ill for several months.

Dr. Butler was a native Washingtonian, born June 25, 1889. He was a graduate of both the old Columbian School of Pharmacy, now a part of George Washington University, and George Washington University School of Medicine, Class of 1925. He interned at Garfield Memorial and Casualty Hospitals.

Dr. Butler practiced in Southeast Washington from 1926 until his retirement in 1951. His offices were last at 1315 Pennsylvania Avenue, S.E. He was active in Southeast civic affairs, notably the Red Cross and Community Chest Fund Drives.

He was an Active member of the Medical Society Society of the District of Columbia from 1927 to 1938.

Before entering the nursing home in 1954, he lived with a sister, Mrs. James E. Ray, at 3705 40th Avenue, Cottage City, Maryland, who survives him. He is also survived by three other sisters and two brothers.

**Transaminase Test—Ostrow, Ticktin and Evans**

(*Continued from page 12*)

6. Nydick, I., Wróblewski, F., and LaDue, J. S.: Evidence for increased serum glutamic oxalacetic transaminase (S-GOT) activity following graded myocardial infarcts in dogs. Circulation, 1955, **12,** 161.
7. Merrill, J. M., Stone, J. L., Grace, J. T., and Meneely, G. R.: Decreased activity of glutamic oxalacetic transaminase in infarcted myocardial tissues of dog. Abstracted, Clin. Research Proc., American Federation for Clinical Research, 1955, **3,** 2.

### Gastroscopy—Billingsley

(*Continued from page 23*)

IX. Foreign body in the stomach is a very rare indication for gastroscopy and is usually met with in institutions for the insane. The chief reason for resorting to the procedure is to determine by its size, shape and presence or absence of sharp edges whether the swallowed object can be safely allowed to pass through the intestine without surgical intervention.

#### CONCLUSION

Gastroscopy as a diagnostic aid has been neglected by the profession at large. It is safe and can be easily carried out in any room of moderate size with a minimum of discomfort to the patient. The reasons why gastroscopy is held in comparative disrepute by some observers are explained with suggestions as to how they can be circumvented. Lastly, a variety of good indications for gastroscopy with case reports are listed and discussed.

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3. BENEDICT, E. B.: Value of gastric biopsy specimens obtained through flexible operating gastroscope. Arch. Path., 1950, **49**, 538.

### David Gruby—Podolsky

(*Continued from page 26*)

improve on the defective methods for the evacuation of the sick and wounded to the rear. He devised a number of appliances, such as a wheeled litter, a movable bed, wheelchairs, and a mobile sterilizer for disinfecting garments.

Gruby also interested himself in many philanthropies and educational works, such as the Free Loan Society, Association des Dames Francaises, and the National Topographic Association, and in charitable deeds among his Austrio-Hungarian countrymen.

His accomplishments did not go unnoticed. On July 14, 1890 the French Republic made him a Chevalier of the Legion of Honor.

For some years before he died Dr. Gruby's popularity had begun to wane and his practice decreased. One day he confined himself to his room and ordered his servants not to disturb him. After 2 days of silence the door was forced, November 14, 1898, and Gruby was found dead, lying quietly as if he were asleep.

### Physical Fitness—Observer

(*Continued from page 40*)

While it is the hope of American officials that their athletes will top all competitors at the Olympics to be held in Rome in 1960, physical fitness, it appears, is not necessarily dependent upon prescribed physical exercise. Witness the African native!

T. W.

### Report of Delegates to AMA Clinical Session

(*Continued from page 44*)

Hospital Association and the American Institute of Architects in their proposed study of hospital design and construction;

Approved the principle of a voluntary reduction in the self-assigned quota of interns as printed in the 1956 handbook of the National Intern Matching Program; and

Instructed the Board of Trustees to accentuate coöperation between the American Medical Association and the American Bar Association to the end that a bill of the Jenkins-Keogh type be enacted at the next session of Congress.

This report is submitted as a brief outline to stimulate your interest in the policies and actions of our parent organization, which are very much the affair of each one of us.

Respectfully submitted,
RAYMOND T. HOLDEN, M.D., *Delegate*
VICTOR R. ALFARO, M.D., *Delegate*
THEODORE WIPRUD, *Secretary*

MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI *February*, 1957 NUMBER 2

# EMERGENCY DEFINITIVE ONE-STAGE SURGERY FOR INTESTINAL OBSTRUCTION*

WILLIAM H. FERGUSON, M.D., F.A.C.S.
*Attending Surgeon, Garfield Memorial Hospital, Washington*
WILLIAM W. CHASE, M.D., F.A.C.S.
*Senior Attending Surgeon and Chief of Service, Garfield Memorial Hospital*

IN 1954 we[1,2] began to treat acute intestinal obstruction by 1-stage definitive surgery. Our method of approach to this problem was based on the concept that adequate therapy in intestinal obstruction must accomplish 2 things: (1) relieve the mechanical impediment, and (2) relieve the distention and remove the toxic content. In accomplishing these objectives we permit a quick return of the intestinal tract to a normal physiologic status. These principles have been applied to both the large and small bowel.

In many institutions decompressive relief of small-bowel obstruction through surgical intervention has been handled well for quite some time, the criterion being that no abdominal wound shall be closed over unruly, distended small bowel. The ease with which the wound can be closed serves as an excellent indicator for the need of decompressing procedures.

Moynihan[3] and Holden[4] over 30 years ago indicated that enterotomy with decompression was the procedure of choice in the therapy of small-bowel obstruction. In all too many instances the problem of large-bowel obstruction is still handled by multiple operative procedures.

More recently Poth[5] demonstrated that no viable bacteria could be isolated from feces following its contact for 15 minutes with Neomycin in concentrations readily maintained in the gastrointestinal tract.

The bactericidal capabilities of Neomycin have allowed us to safely extend decompressing procedures and 1-stage definitive surgery to include the obstructive problems of the large bowel. Cohn,[6] in an excellent review of strangulation obstruction, clearly indicates the toxic and sometimes lethal effect of strangulated intestinal content. He has also demonstrated the effectiveness of antibiotics in combating this toxicity and prolonging the viability of the bowel proper.

We believe that the mortality rate in intestinal obstruction can be reduced and that it should approach that of elective surgery rather than the 15 to 30 per cent rate that is repeatedly reported in our surgical literature of today.

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* Presented at the Golden Anniversary Meeting of the Southern Medical Association in Washington, D. C., November 12, 1956.

We have operated upon 45 cases of intestinal obstruction with the method to be described. At the same time we have accomplished curative resections for malignant lesions. The locations of the lesions, diagnosis and the number of each are shown in tables 1 and 2.

TABLE 1

*Diagnoses of Lesions of Small Bowel*

| Diagnosis | No. of Cases |
|---|---|
| Adhesions | 11 |
| Carcinoid | 1 |
| Endometrioma | 1 |
| Gangrene | 1 |
| Hernia internal | 1 |
| Intussusception | 1 |
| Meckel's diverticulitis metastatic carcinoma | 1 |
| Volvulus | 2 |
| Total | 19 |

## TECHNIC OF OPERATION

### SMALL BOWEL

In cases of small bowel obstruction that present a minimal amount of distention and are of short duration, correction of the mechanical impediment may at times suffice. In other words, the abdominal wound can be closed easily following the necessary operative procedure. These cases do not need intestinal decompression. For cases that present a sea of unruly distended intestine the problem is approached in the following manner.

Through a large right paramedian incision the distended bowel is gently delivered to the anterior abdominal wall. The decompression is initiated by dividing the distended bowel close to the collapsed segment between straight Kocher clamps. If the distention is too great for this, needle aspiration of the gaseous content will permit a safe application of the dividing clamps.

After the bowel is divided, several centimeters of the mesentery is divided at the margin of the bowel. This will permit a tubelike portion of the obstructed segment of the bowel to be held in a sterile basin at the side of the patient. With the opened end of the bowel held firmly in place its content can be emptied from the ligament of Treitz down by gentle stripping motions as indicated in figure 1.

After the bowel is emptied, that portion of the small bowel which has been used as a tube to deliver the content into the basin is transected at the edge of the abdominal wound and dropped into the collecting basin. The assistant now removes this basin and replaces his gown and gloves prior to returning to the operating team.

TABLE 2

*Diagnoses of Lesions of Various Portions of Colon*

| Diagnosis | | No. of Cases |
|---|---|---|
| Right | Carcinoma | 3 |
| | Carcinoma recurrent | 1 |
| | Diverticulitis | 1 |
| | Diverticulitis perforated | 2 |
| Transverse | Carcinoma | 3 |
| Left | Carcinoma | 12 |
| | Endometrioma | 3 |
| | Volvulus | 1 |
| Total | | 26 |

At no time have we noted any evidence of pulse, blood pressure or respiratory distress from this gentle stripping action on the small bowel. Extreme gentleness is exercised at all times during this procedure. Gauze sponges saturated in a 3 per cent Neomycin solution in saline (1 Gm. per 30 to 40 c.c. saline) are used to "police" the transected ends of the small bowel.

This procedure provides an empty small bowel capable of early physiologic function. The distended segment recovers its intestinal tone and turgor very quickly following the decompression. One often observes motility returning to the upper jejunum while still decompressing the lower ileum. Following the decompression the continuity of the bowel can be established by an end-to-end open anastomosis. This technic will be discussed later.

When the anastomosis is completed, the entire intra-abdominal area can be sprayed with a 3 per cent Neomycin solution by using a small-gauge needle and a Luer-Lok syringe. We also place 20 c.c. of the 3 per cent Neomycin solution in the lumen of the proximal bowel by inserting a needle through the distal bowel wall as it is held against the anastomotic stoma, thereby assuring the accurate placement of the solution (figure 2). The total intraperitoneal dosage of Neomycin in these cases has been 1 Gm. or less, and at no time have we experienced any complications from its use, including that of respiratory arrest.

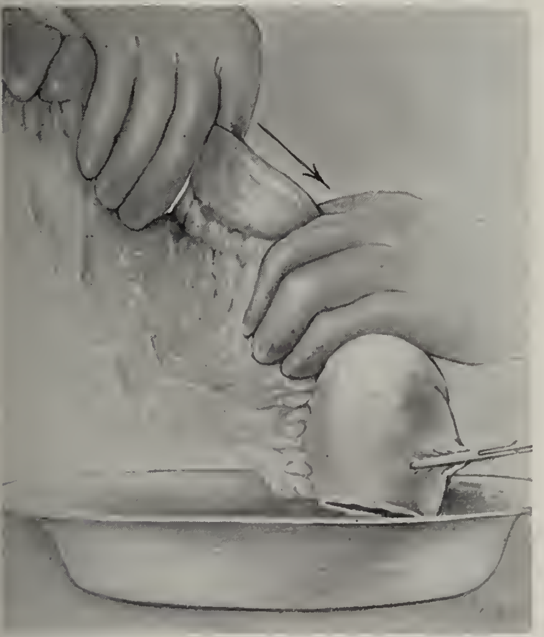

Fig. 1. Emptying of small bowel by stripping toward open end.

The gloves of the operating team are changed prior to closing the abdominal wall over the collapsed small bowel.

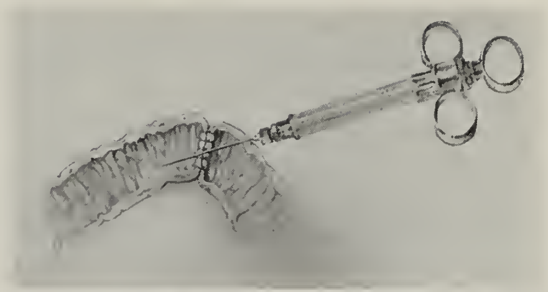

Fig. 2. Injection of Neomycin solution through distal bowel wall into proximal bowel.

## RIGHT COLON

The abdomen is entered through a right paramedian incision. If the ileocecal valve is competent and the small bowel is not distended, the specimen to be removed may serve as a container for the obstructed bowel content (figure 3).

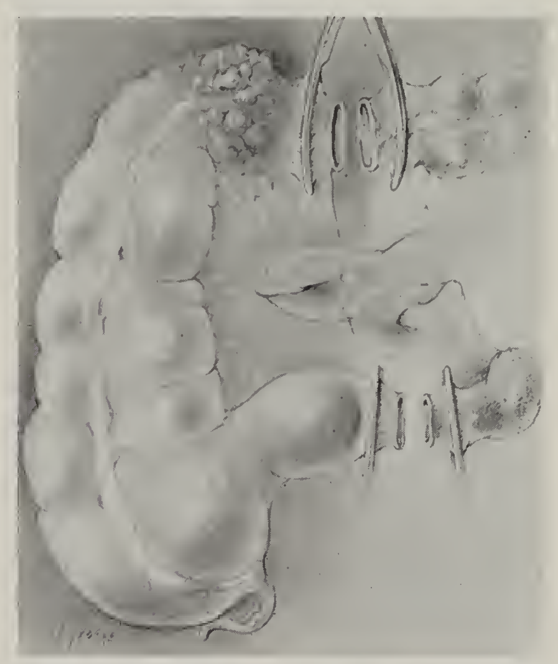

Fig. 3. Use of section of colon to be removed as reservoir for obstructed small bowel content.

In many cases, with early diagnosis and operation, the obstructed bowel is only moderately distended and the entire small bowel can be emptied into the right colon by stripping maneuvers as previously described under the small bowel procedure. This can be done prior to the division of the terminal ileum, and here again the specimen and its content can be removed as a single procedure.

In obstructing lesions of the cecum with incompetent ileocecal valve the terminal ileum is transected at its elective anastomotic site between clamps and the proximal distention is handled as described under small bowel procedures. If there is present such a marked distention of the right colon as to interfere with its mobilization, needle aspiration or the introduction of a rectal tube through the transected terminal ileum into the cecum will permit sufficient decompression for a safe mobilization procedure.

When the mobilization has been completed, the transverse colon is emptied by a reverse stripping of the bowel toward the obstructing lesion. The colon is divided at the site of election and removed. The bowel ends are cleansed with gauze sponges moistened in 3 per cent Neomycin solution. Here again, 3 per cent Neomycin is placed in the proximal lumen through the completed anastomosis by a needle inserted through the distal bowel wall. Neomycin is sprayed over the abdominal cavity, and the drapes and the gloves are changed prior to the abdominal closure.

### LEFT COLON

The abdomen is entered through a left paramedian incision. On rare occasions obstructions of the left colon may present only a moderate amount of distention, permitting sufficient mobilization to use the specimen as a container. In these cases gentle stripping of the proximal and distal bowel content into the segment to be removed will accomplish simultaneous decompression and resection. Most often this procedure is not possible because of the marked distention associated with lesions obstructing the left colon and rectosigmoid. When one is confronted with this problem, needle or trocar aspiration proximal to the obstructing lesion will reduce the distention to a point where mobilization of the colon may be safely accomplished.

Following the mobilization of the left colon and ligation of the inferior mesenteric vessels, a reverse stripping of the rectosigmoid area is done, emptying the bowel toward the obstructing lesion. A crushing clamp is placed across the bowel just proximal to the site of transection and the bowel is divided, leaving an open distal lumen which is cleansed and temporarily packed with gauze sponges moistened in 3 per cent Neomycin solution to await the anastomosis.

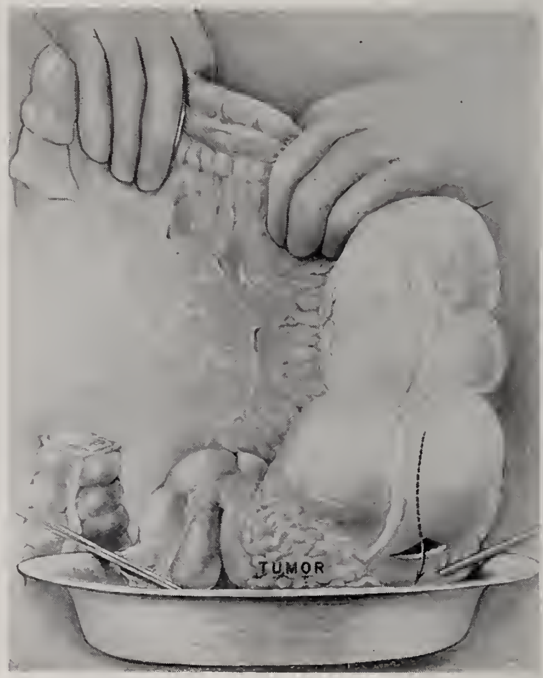

Fig. 4. Emptying of bowel after ligation of inferior mesenteric vessels at point of origin.

Ligation of the inferior mesenteric vessels at their point of origin permits the carrying of a long segment of the obstructed bowel laterally away from the operative field. A large opening is made in the distended bowel as it is held in a sterile basin by an assistant (figure 4). With patience and gentleness the intestinal tract from the jejunum down may be completely emptied. With a mobilized and decompressed left colon and sigmoid either a palliative or a curative type of resection may be done as the situation and diagnosis demand.

An open end-to-end 1-layer anastomosis has been accomplished in all cases. Neomycin is placed in the proximal bowel, gloves and drapes are changed, and Neomycin is sprayed over the peritoneal cavity prior to the peritonealization and closure.

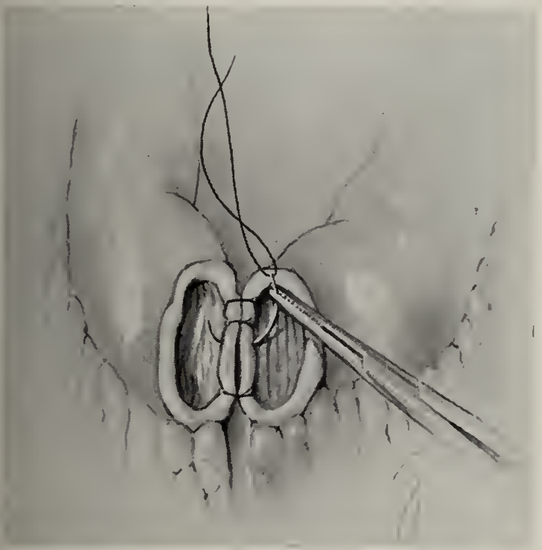

FIG. 5. Use of through-and-through stitch.

## ANASTOMOSIS

Since the submucosal layer of the intestine is the layer of strength and the serosal is the layer of agglutination, we must approximate these respective layers in such a way as to permit early sealing of the suture line and firm functional healing.

In a multiple-layer anastomosis the last layer that is so placed as to include the submucosa and approximate the serosa is responsible for the security of the anastomosis. Additional layers tend to narrow down the lumen of the bowel or at times form an internal cuff of tissue that we are sure is responsible for many situations commonly referred to as stomal edema.

We feel that a 1-layer through-and-through interrupted cotton suture gives us the anastomosis that is most secure and quite capable of early function. This applies to both large and small bowel.

In the small bowel we rotate the mesenteric borders slightly so that they do not fit directly opposite each other. In the large bowel the ends are fitted comfortably and without tension.

The through-and-through stitch forming the posterior part of the anastomosis as demonstrated in figure 5 presents no problem of placement or understanding. The same stitch can be used for almost the entire circumference of the anastomosis.

By moderate rotation the lateral angles of the anastomosis are sutured. The anterior portion of the anastomosis can be sutured from the inside with the through-and-through stitch by using 2 spaced sutures for traction and everting this portion through the opening that remains to be closed (figure 6). This everting procedure cannot completely close the anastomosis, and as a usual rule 1 to 3 interrupted Connell sutures will be necessary to finish the anastomosis. In our hands this technic has been fast and secure.

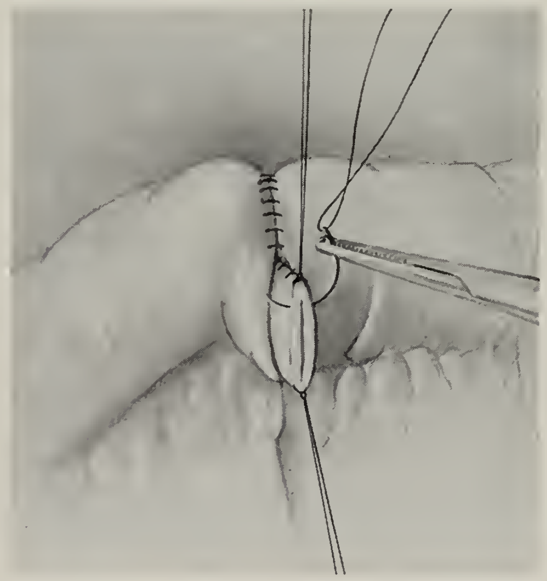

FIG. 6. Suture of anterior portion of anastomosis from inside.

## AIDS TO MANAGEMENT AND CARE

1. Attention to fluids and electrolyte needs at all times.

2. Preoperative sigmoidoscopic and X-ray examinations to include barium enema available at all times.
3. No barium by mouth if obstruction is suspected.
4. To surgery with gastric tube in place and suction.
5. Endotracheal anesthesia if possible.
6. Contaminated tissue and instruments maneuvered away from the operative field at all times.
7. No intestinal spillage in the peritoneal cavity.
8. Gloves and drapes changed as the anastomosis is completed.
9. Neomycin placed in the lumen and in the peritoneal cavity.
10. If one is in doubt about the wound security, through-and-through wire sutures for closure.
11. Dilation of the anal sphincters in all cases following surgery.
12. Neomycin administered through the gastric tube the next day.
13. Supportive antibiotics.
14. When gas is passed per rectum, patient started on a regular diet.
15. For patients without means of proper mastication, a soft diet.

## Causes of Death

There have been 6 deaths in this series with a mortality rate of 13.3 per cent. Briefly these deaths are as follows:

1. An obstructing carcinoma of the right colon in a patient aged 83 who died on the fourteenth postoperative day from aspiration pneumonitis. An autopsy was done, demonstrating a functional anastomosis and no evidence of peritonitis.
2. An obstructing Meckel's diverticulitis and associated metastatic lesions in the small bowel from a prior carcinoma of the colon in a patient aged 70 who died on the thirteenth postoperative day from a cardiovascular accident. The autopsy demonstrated a functional anastomosis and no evidence of peritonitis.
3. An obstructing carcinoma of the left side of the colon in a patient aged 55 who eviscerated on the eighth postoperative day following left colectomy and resection of the left lobe of the liver and spleen for metastasis. This patient underwent a secondary closure with through-and-through wire sutures and expired on the fourth postoperative day from a pulmonary infarct. The autopsy demonstrated a functional anastomosis and peritonitis with a small 3 cm. abscess in the splenic area.
4. An obstructing carcinoma of the sigmoid in a patient aged 81 who died on the twenty-third postoperative day. There was no autopsy. For religious reasons this patient refused blood transfusions and some forms of intravenous therapy. Clinically she died from anemia, hypoproteinemia and inanition. She repeatedly made the statement that she wanted to die.
5. An obstructing carcinoma of the sigmoid in a patient aged 58 who died on the first postoperative day from a myocardial infarct. There was no autopsy. This patient refused therapy and surgery for 2 days until severe abdominal distention and cramps eventually forced his consent for surgery.
6. An obstructing adhesion of the terminal ileum in a patient aged 68 who died on the eighteenth postoperative day from a pulmonary infarct. There was no autopsy.

On a close inspection of the deaths in this series of cases we find that 5 were directly due to associated medical complications and not the result of the surgical procedures.

There were 3 autopsies done, and in 2 of these no evidence of peritonitis was found and a functional anastomosis was demonstrated. In the other case a functional anastomosis was demonstrated, but there was also an associated peritonitis and an abscess in the splenic area. Technically our surgical procedure was at fault in 1 case out of 45, and this was due to an evisceration of the wound on the eighth postoperative day necessitating a secondary closure, following which he expired on the fourth day thereafter from a pulmonary infarct.

We realize that this small series of cases is not conclusive, but it would seem to indicate a better approach to the problem and raise the hopes for a lowered mortality rate in this particular field of surgery.

The morbidity of this series of cases may best be indicated by the following facts:

1. The average hospital stay was 10 to 11 days.

2. The extremes of postoperative temperature elevations were from 98.6° to 101.8°F except for the terminal temperatures.

3. A functional bowel was present on the third postoperative day manifested by the voluntary expulsion of flatus per rectum.

4. Their ages were from 28 to 84 years. In addition to lowered mortality and morbidity figures there is an economic value to be considered. Certainly, a shorter hospital stay and 1 trip to the operating room are far less demanding in both time and risk than multiple procedures.

Our approach to this problem of intestinal obstruction does not require elaborate or expensive equipment or special skills and is something one can readily accomplish in any hospital.

## Conclusions

Morbidity and mortality rates in acute intestinal obstruction can be reduced by emergency definitive 1-stage surgery.

Surgical decompression of the acutely obstructed colon as well as the small bowel is a safe and necessary procedure.

In the hands of a skilled surgeon with modern hospital facilities there should be no need for special equipment or training.

Forty-five cases of emergency definitive 1-stage surgery for intestinal obstruction have been presented with 1 technical failure.

N. B. The illustrations for this report were made in the Department of Medical Illustration of the Georgetown University School of Medicine (B. J. Melloni, Director).

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# A SIMPLIFIED PLAN OF FLUID THERAPY*

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THE FLUID therapy program which I shall present is not an original one but is based primarily upon the work of Talbot, Crawford and Butler.[1] There are a large number of fluid therapy regimens which are successful, but they succeed primarily because they provide water and electrolytes in amounts which permit the body regulatory mechanisms to selectively retain or reject these substances in accordance with the body needs. It is a well established fact that in most instances of acid-base imbalance, the body regulatory mechanisms remain unimpaired. This fact particularly is true of the pediatric age group. Once it has been determined that these body regulatory mechanisms, especially renal function, are intact in the individual patient, it then becomes possible to devise a plan of fluid therapy based on sound physiologic principles which will require a few simple mathematical calculations. As will be seen, the fundamental facts of physiologic homeostasis make it possible to utilize a single, "all-purpose" solution in most circumstances.

Butler[2] has shown that when the surface area of the patient is utilized as a criterion, the basic requirements of fluid and electrolytes per unit of surface area remain the same in all age groups. The ready availability of nomograms which permit direct estimation of surface area from height and weight makes this measurement a practical one. The wide variation in the average water and electrolyte intake per unit of body weight is sufficient reason for discarding this method of estimating the patient's requirements.

There are 3 basic, essential components in any parenteral fluid program, water, electrolytes, and calories.

Water is needed to replace the insensible water losses, i.e., the losses incurred through the skin and through the respiratory tract. As a rule this amounts to 500 cubic milliliters per square meter of body surface in each 24-hour period. Water is essential for the formation of urine and to meet the needs for the renal excretion of solutes. When renal function is normal and dehydration is absent, the human excretes 1,000 cu.ml. urine for each square meter of body surface per day. The sum of the insensible water loss and the water needed for urine formation equals the basic maintenance requirement for water. This amounts to 1,500 cu.ml. per square meter of body surface per day. Finally, water is essential to replenish any deficits incurred as a result of disease. It is possible to estimate water deficits from a clinical evaluation of the extent of dehydration. Snyder[3] pointed out that in severely dehydrated patients, a 10 per cent weight loss can be assumed, and that half of this deficit can be replaced safely in the first 24-hour period and another one-fourth in the second day of parenteral fluid therapy. Similarly, in the moderately dehydrated patient, a weight loss of 5 per cent may be assumed and calculations made accordingly. To illustrate all of these points, let us assume that a patient is encountered who is severely dehydrated; the patient is found to be 125 cm. long and to weigh 30 Kg. From a nomogram it will be seen that the patient has a surface area of 1 square meter. To estimate the fluid needs for the first 48 hours of treatment the following calculations are made:

(a) Daily fluid maintenance is 1,500 cu.ml. per square meter of surface area per day.

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* Presented at the Golden Anniversary Meeting of the Southern Medical Association in Washington, D. C., November 12, 1956.

(b) Since the patient is severely dehydrated, he has sustained a weight loss of 10 per cent, or 30 Kg. × 10 per cent equals 3 Kg. Thus the patient has a water deficit of 3 Kg. or 3,000 cu.ml. One-half of this deficit, or 1,500 cu.ml., will be replaced in the first 24-hour period and one-fourth, or 750 cu.ml., in the second 24 hours.

(c) Adding the daily fluid maintenance to the deficit, the total amount of fluid to be administered in the first 24 hours of treatment is 3,000 cu.ml., and the fluid requirement in the second 24 hours is 2,250 cu.ml.

Electrolytes must be supplied in any parenteral fluid program. First of all, urine is never salt-free. As long as a patient forms urine he will lose electrolytes. Too, it is necessary to supply electrolytes to permit the body to maintain osmotic equilibria, electrical neutrality, and hydrogen ion concentration. A small amount of salt also is lost in the insensible water. Finally, most patients who require parenteral alimentation have an electrolyte deficit at the time they come under the care of a physician. In the light of present knowledge it is possible to estimate the basic requirements for the more important electrolytes, viz., sodium, potassium, and chloride. Approximately, these are:

(a) Sodium—50 to 60 mEq. per square meter of surface area per day.
(b) Potassium—30 to 40 mEq. per square meter of surface area per day.
(c) Chloride—30 to 40 mEq. per square meter of surface area per day.

In addition, if one assumes that renal function is normal, as it will be in the majority of patients, the limits of renal tolerance for these same electrolytes will be:

(a) Sodium—250 mEq. per square meter of surface area per day.
(b) Potassium—200 mEq. per square meter of surface area per day.
(c) Chloride—200 mEq. per square meter of surface area per day.

Therefore, it is apparent that, when renal function is normal, a wide range of safety exists between the basic requirements and the limits of renal tolerance for electrolytes. These facts make it possible to construct a solution for parenteral use which would accomplish the following objectives:

(a) Supply the daily basic requirements of electrolytes.

(b) Provide an excess of electrolytes over and above the basic requirements. This excess is needed to correct or to correct partially any deficit which might exist as a result of disease.

(c) Remain well within the range of safety between basic requirements and the limit of renal tolerance. In so doing, the administration of such a solution even to a patient who possesses an excess of one or more of these electrolytes would produce no harm, since the patient's kidneys could still handle the excess.

These "all-purpose" solutions have been called multiple electrolyte, polyionic, or homeolyte solutions. They possess one outstanding advantage: In meeting the water needs of a patient one automatically meets the salt needs. In general, most of these solutions are modifications of the one originally formulated by Butler and Talbot, usually called Butler's solution, which has the following electrolyte composition for each liter of water:

Sodium—40 mEq.
Potassium—35 mEq.
Chloride—40 mEq.
Lactate—20 mEq.
Phosphate—15 mEq.

If Butler's solution is used to supply the fluid requirements in the example of the patient given before, in the first 24 hours of therapy the patient would have received 3,000 cu.ml., or in terms of electrolytes:

Sodium—120 mEq.
Potassium—105 mEq.
Chloride—120 mEq.

This would satisfy the basic requirements, provide an excess to correct any deficits, and still remain well below the renal limits of tolerance for these electrolytes.

Calories are needed to prevent ketosis. Furthermore, a modest supply of calories decreases endogenous protein catabolism. It is not possible in any parenteral fluid program to maintain the basic caloric requirements. However, Talbot, Crawford, and Butler[1] have shown that the ketosis and tissue catabolism which accompany fasting can be minimized, although not completely eliminated, by a carbohydrate intake of between 60 to 75 grams per square meter of body surface per day. If the "all-purpose" solution is constructed so that it contains 5 per cent glucose, it then becomes apparent that when this solution is administered on the basis of 1,500 cu.ml. per square meter of body surface per day, it will supply 75 grams of glucose per square meter of body surface, the minimum amount necessary to abort ketosis and tissue catabolism.

In many patients renal function will be depressed because of body fluid deficits. This decrease in renal function is in reality a protective mechanism to conserve as much body water as possible. In the presence of dehydration there is a decrease in available water. To conserve as much water as possible, there is a compensatory decrease in renal blood flow and glomerular filtration rate. As a result, the urine is concentrated and scanty. Butler's solution contains important amounts of potassium, a potentially toxic ion. Such a solution should not be administered until renal function has been established and is able to control the electrolyte concentration of the extracellular fluid. In order to accomplish this end a nonpotassium-containing solution must be administered. For this purpose a 0.3 per cent sodium chloride solution with 5 per cent carbohydrate may be utilized.[4] In effect, a simple "water loading" test is performed. When water is added to the plasma at a rate of 12,000 cu.ml. per square meter of body surface per day, the plasma volume will be expanded and urine formation must occur if renal function is adequate. This corresponds to 360 cu.ml. per square meter of body surface in 45 minutes. This amount of "potassium-free" fluid is administered initially, and voiding is used to indicate that the kidney is functioning at an adequate level of efficiency. Most patients in whom the functional integrity of the body homeostatic mechanisms are unimpaired will void before the 45-minute interval has passed. If the patient does not void in this interval the "potassium-free" solution should be administered at a decreased rate, approximately 3,000 cu.ml. per square meter of body surface area per day. If the patient still does not void in the next hour or so, it is probable that his kidney function is severely impaired. In such instances a careful review of the clinical situation is in order.

In conclusion, each patient with a fluid and electrolyte imbalance must be individualized. The history of the illness together with a careful physical examination and laboratory aids must be invoked and carefully evaluated before embarking on any fluid therapy regimen. In the majority of instances the homeostatic mechanisms for maintaining the acid-base balance of the body are unimpaired. For this reason the simplified plan of fluid therapy which has been proposed can be utilized.

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# THE PROBLEM OF LYMPHEDEMA OF THE ARM FOLLOWING POSTOPERATIVE IRRADIATION FOR CARCINOMA OF THE BREAST*

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THE USE of routine postoperative X-ray therapy following radical mastectomy for carcinoma of the breast has long been a controversial subject. In the Oncology Department of the Georgetown University Medical Center all patients with breast carcinoma who at surgery are found to have metastases to axillary nodes are given a course of postoperative X-ray treatments to the axilla and chest wall. It is our belief that this regimen yields a higher percentage of 5- and 10-year survivals and reduces the local recrudescence of disease.

In recent years there has been a move by some to abandon radical mastectomy as the treatment of choice for breast carcinoma. McWhirter[1] and others claim that better survival results are obtained by simple mastectomy followed by postoperative irradiation. Although we still think that every patient with operable breast carcinoma should have the benefit of radical mastectomy, it is not our aim to discuss the surgical aspects but to consider the relation, if any, of postoperative irradiation to swelling of the arm following radical mastectomy.

There are numerous articles in the literature concerning the incidence, etiology, prevention, and treatment of post-mastectomy edema. The reported incidences vary widely.

Among the factors indicated as causing or aggravating lymphedema are poor location of the incision, wound infection, angulation of the axillary vein, occlusion of the axillary vein, prolonged drainage, axillary recrudescence of disease, fibrosis resulting from wound infection, large serum collections or produced by irradiation, and obesity.

According to Treves,[2,3] swelling of the arm occurs in "about 75 per cent of the cases." MacDonald[4] believes that 40 to 50 per cent of women who have the radical operation develop a swollen arm. He considers obesity to be the most important single factor in its genesis, predisposing as it does to fat necrosis in the operative field. Devenish and Jessop,[5] on the other hand, think that in the obese person a greater number of the lymphatics from the arm are removed in the development of the superior axillary flap, whereas in the thin individual the relatively greater amount of fat left on the flap spares these lymphatics, with resulting decreased incidence of lymphedema in the thin patient. They believe that lymphatic obstruction alone is sufficient to cause the swelling and that leaving a sufficient thickness of subcutaneous tissue on the upper axillary flap should diminish the incidence of the complication without altering the efficacy of the operation. Only 15 of their 90 patients who survived 5 years or more developed edema, and it was moderate or severe in only 7.

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* Presented at the Golden Anniversary Meeting of the Southern Medical Association in Washington, D. C., November 12, 1956.

Holman et al[6] reviewed 100 cases and found that significant degrees of swelling may escape recognition unless measurements are made. In their series 70 per cent had detectable swelling and 11 per cent had "marked swelling." They conclude that the greatest factors in causing swelling are wound infection and "X-ray dermatitis." Swelling was present in all 29 patients who had both X-ray treatment and infection, and all who had marked swelling had both. Infection was indicted by Halsted[7] in his classical paper on the subject of elephantiasis chirurgica. Deaton and Bradshaw[8] studied 24 patients, 12 of whom had some degree of edema, and stated, "There did not appear to be any relation between edema and (1) the type of cancer, (2) X-ray therapy, (3) presence of axillary metastases, (4) arterial blood pressure, and (5) use of the arm. The only factor investigated that seems to be associated with the presence or absence of edema is infection."

Veal[9] pointed out that there are 3 types of edema, venous, lymphatic, and a combination of these. Simple lymphatic edema was found to be the least frequent cause, occurring in but 10 per cent of his cases. The edema in these patients is usually the result of recurrent lymphangitis. Obstruction of the axillary and subclavian veins by angulation and/or occlusion resulting from tumor or scar is by far the more common cause of postmastectomy edema, according to Veal. He found it in 90 per cent of his cases. Devenish and Jessop[5] disagree with this, but studies of Russo, Parker and Mathews[10] tend to support Veal.

Guthrie and Gagnon[11] believe that, "While definite clinical evidence is lacking, roentgenotherapy may precipitate chronic edema by blocking the lymphatics before collateral circulation takes place by favoring the formation of fibrosis." However, edema developed in only 8 of their 56 patients receiving X-ray therapy, and in 6 of these it subsided with conservative therapy.

Villasor and Lewison[12] think that infection is the most important single factor known to cause or aggravate existing lymphedema and that X-ray therapy appears to be responsible for a higher percentage of patients with severe lymphedema.

In the operation of radical mastectomy tenting of the skin over the axilla leads to dead space with collections of blood and serum which predispose to infection, increases the amount of cicatrix formed, and results in a greater possibility of angulation and/or occlusion of the axillary vein. Skin-grafting, allowing better utilization of the lateral flap to obliterate dead space, is advocated by some to lessen the incidence of these complications. To prevent cicatrix forming about the axillary vein with angulation or obliteration of the vessel, various muscles have been used to cover the vein and help obliterate dead space. Rienhoff[13] utilized the latissimus dorsi but is quoted by Treves[2] as having given up the method because he decided that it is of no value. Treves[3] more recently has advocated the use of gelfoam rolls to splint the vein, obliterate dead space, and provide a "bridge" for the regeneration of lymphatics. All such procedures seem doomed to failure in a large percentage of cases.

We believe that careful placement of the incision, avoiding the axilla and arm; gentle handling of tissues with sharp, cold steel dissection; the use of fine, nonabsorbable suture material to effect perfect hemostasis, and the application of a bandage which will obliterate dead space yet allow early use of the arm and not occlude the axillary vein will do much to prevent the development of edema. We have recently adopted the method, originated by others, of inserting a multiperforated catheter into the axilla through a stab wound and placing it on constant suction immediately postoperatively. The results, in terms of fewer serum collections, better adherence of flaps and wound healing, have been most gratifying.

An analysis of our clinical material has been made in an effort to evaluate the role of postoperative X-ray therapy in the development of edema. In doing this we have compared our results with Daland's series,[14] few of whom received postoperative therapy. Daland studied 90 patients who had had radical mastectomy. Among these, 17 per cent had "moderate" swelling of the ipsilateral upper arm, an increase of from 2.5 to 4.5 cm., and 5.5 per cent had "severe" swelling with increase in circumference of from 5 to 15 cm. An additional 31.0 per cent had slight swelling (less than 2 cm.). Arbitrarily selecting 2 cm. as a figure at or below which swelling is insignificant, we have determined, according to our classification, a significant swelling of the upper arm in 22.5 per cent of Daland's cases (table 1).

TABLE 1*

*Arm Measurements (Circumference) after Radical Mastectomy (Daland[14])*

| Measurement | Upper Arm No. of Cases | | Forearm No. of Cases | |
|---|---|---|---|---|
| No swelling: | | | | |
| Decrease in size | 5 | (45.0%) | 6 | (55.0%) |
| No change from normal arm | 21 | | 31 | |
| Increase of 0.5 cm. | 15 | | 13 | |
| Slight swelling: | | | | |
| 1.0 cm. | 8 | (31.0%) | 10 | (27.0%) |
| 1.5 cm. | 16 | | 10 | |
| 2.0 cm. | 4 | | 5 | |
| Moderate swelling: | | | | |
| 2.5 cm. | 8 | (17.0%) | 3 | (10.0%) |
| 3.0 cm. | 3 | | 2 | |
| 3.5 cm. | 2 | | 1 | |
| 4.0 cm. | 3 | | 1 | |
| 4.5 cm. | 0 | | 2 | |
| Severe swelling: | | | | |
| 5.0 cm. | 0 | (5.5%) | 2 | (6.6%) |
| 6.0 cm. | 2 | | 0 | |
| 7.0 cm. | 2 | | 2 | |
| 10.0 cm. | — | | 1 | |
| 11.0 cm. | — | | 1 | |
| 15.0 cm. | 1 | | — | |
| Totals | 90 | | 90 | |

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MATERIAL AND METHOD

Among 250 patients of breast carcinoma treated in the Oncology Department of the Georgetown University Medical Center since 1947, we have recorded measurements of the affected and unaffected arms in 72 patients who have received a cycle of X-ray therapy to the axilla following radical mastectomy. The patients have been followed from 2 months to 5 years after completion of the therapy. The following physical factors were used: 250 KV; 15 Ma; 1 mm. Cu. 1 mm. Al. added filter; HVL 1.95 mm. Cu.; 50 cm. STD. Approximately 2,000 roentgens were given at the rate of 200 roentgens per day as measured in air to each of 3 ports in rotation. On the average, a 10 by 10 cm. posterior axillary and anterior axillary port was used in addition to a direct axilla circular portal 10 cm. in diameter. This results in a tumor dose approximating 4,600 roentgens at the center of the axilla, according to the anatomic measurements as described by Duffy and Lucas.[15]

There was no rigid uniformity of operative technic which varied with the individual surgeon. The patients were sent for postoperative therapy at various periods ranging from 10 days to several weeks after surgery. The presence or absence of infection, use of drains and other factors, save in personal cases, were, in most instances, unknown to us.

In common with other reported series of breast cancer, 43 patients (59.7 per cent) had axillary metastases. Thirty-three, or 76.7 per cent, of these patients with axillary metastases developed a swollen arm. Those without axillary metastases totaled 27 (37.5 per cent) and of these 16 (59.2 per cent) developed edema of the arm. In 2 patients (2.7 per cent) sent from other institutions for postoperative therapy the status of the nodes was unknown to us. Edema did not develop in either case.

The circumferences of the mid-upper and mid-lower arm were measured before the start of therapy and at return visits following completion of the treatment described above. Adapting Daland's classification to this series, we have divided the cases into 4 groups: (1) no swelling (0 – 0.5 cm.), (2) slight swelling (1 – 2 cm.), (3) moderate swelling (2.5 – 4.5 cm.), (4) severe swelling (5 cm. or more).

## Results

In regard to the upper arm, 23 patients (31.9 per cent) were in group 1, i.e., with no swelling, while in regard to the lower arm there were 28 patients (38 per cent) in this group (table 2). Daland found no swelling in 45 per cent of the upper arms and in 55 per cent of the lower arms.

TABLE 2

*Measurements of Homolateral Arm Following Radical Mastectomy and Postoperative Irradiation (Present Series)*

| | Upper Arm | | Lower Arm | |
|---|---|---|---|---|
| No swelling: | | | | |
| Decrease | 4 | | 6 | |
| No change | 13 | (31.9%) | 14 | (38.8%) |
| Increase 0.5 cm. | 6 | | 8 | |
| Slight swelling: | | | | |
| 1.0 cm. | 2 | | 10 | |
| 1.5 cm. | 14 | (31.9%) | 11 | (33.3%) |
| 2.0 cm. | 7 | | 3 | |
| Moderate swelling: | | | | |
| 2.5 cm. | 2 | | 1 | |
| 3.0 cm. | 1 | | — | |
| 3.5 cm. | 1 | (13.8%) | 5 | (12.5%) |
| 4.0 cm. | 1 | | 3 | |
| 4.5 cm. | 5 | | — | |
| Severe swelling: | | | | |
| 5.0 cm. | 3 | | 1 | |
| 5.5 cm. | 4 | | 6 | |
| 6.0 cm. | 2 | | 1 | |
| 6.5 cm. | 2 | (22.2%) | 1 | (15.2%) |
| 7.0 cm. | 1 | | 1 | |
| 7.5 cm. | 2 | | — | |
| 8.0 cm. | 1 | | 1 | |
| 9.0 cm. | 1 | | — | |
| Totals | 72 | | 72 | |

In group 2, i.e., with 1–2 cm. increase in circumference, 23 patients (31.9 per cent) were found with this degree of swelling in the upper arm. Two had an increase of 1.0 cm., 14 an increase of 1.5 cm., and 7 an increase of 2.0 cm. Of the lower arm measurements, 24 patients (33.3 per cent) had this "slight" swelling. Daland found 31.0 per cent of his patients to have "slight" (group 2) swelling in the upper arm and 27 per cent in the lower arm.

In our series, 10 patients (13.8 per cent) were found to have moderate swelling of 2.5 to 4.5 cm. (group 3) in the upper arm. In 5 of these the range was 2.0 to 4.0 cm., and 5 had an increase of 4.5 cm. In the lower arm, 9 patients (12.5 per cent) had swelling of 2.5–4.5 cm. Daland's series, in comparison, revealed 17.0 per cent with moderate (group 3) swelling in the upper arm and 10 per cent in the lower arm.

Severe (group 4) swelling of the upper arm occurred in 16 patients (22.2 per cent) in our series. The increase in circumference was 5.0 cm. in 3, 5.5 cm. in 4, and 6.0 to 9.0 cm. in the remaining 9. In regard to the lower arm, 11 patients (15.2 per cent) had severe (group 4) swelling. Daland reported an incidence of but 5.5 per cent severe (group 4) swelling in the upper arm and 6.6 per cent in the lower arm. It is significant, perhaps, that 4 of Daland's 5 cases with severe swelling of the upper arm and 2 of his 6 cases of severe swelling of the lower arm received X-ray therapy.

We have arbitrarily selected the figure of 2 cm. increase in circumference as the figure at or below which swelling is insignificant. Thus, only those with moderate or severe swelling have significant lymphedema. Utilizing this standard we find 36 per cent (26 cases) of the upper arms and 27.7 per cent (20 cases) of the lower arms in this series to have significant swelling. Again referring to Daland's figures, we find his moderate and severe groups total 22.5 per cent and 16.6 per cent for the upper and lower arms respectively. Thus it appears in comparing a series in which few cases received postoperative X-ray therapy to one in which all cases were so treated that postoperative irradiation does increase the likelihood of developing post-mastectomy lymphedema (table 3).

TABLE 3

*Measurements of Homolateral Arm Following Radical Mastectomy*

| | Georgetown Series | | | | Daland Series | | | |
|---|---|---|---|---|---|---|---|---|
| | X-Ray Therapy | | | | | | | |
| | Upper Arm | | Lower Arm | | Upper Arm | | Lower Arm | |
| | No. | Per cent | No. | Per cent | No. | Per cent | No. | Per cent |
| No swelling | 23 | 31.9 | 28 | 38.8 | 41 | 45 | 50 | 55 |
| Slight swelling | 23 | 31.9 | 24 | 33.3 | 28 | 31 | 25 | 27 |
| Moderate swelling | 10 | 13.8 | 9 | 12.5 | 16 | 17 | 9 | 10 |
| Severe swelling | 16 | 22.2 | 11 | 15.2 | 5 | 5.5 | 6 | 6.6 |
| Significant swelling | | 36. | | 27.7 | | 22.5 | | 16.6 |

We have seen lymphedema regress spontaneously in a few cases, but not completely in all of these. This has usually occurred over a period of several months. Over a 4-year period in 1 case there was a gradual regression of 3.0 cm. in the circumference of the arm. In 19 per cent of all our cases with significant edema a gradual, spontaneous regression of 2 cm. or more was noted after edema had become established. Thus, we cannot agree entirely with the statement that, once established, the process of lymphedema is irreversible. Measures such as sleeping with the arm elevated on pillows and elevating the arm for periods during the day may limit the process and may even effect a change for the better. In severe cases it may be necessary to wear an elastic bandage on the arm to limit the swelling. In none of our cases has severe pain and/or disability been encountered.

Operative procedures for the correction of lymphedema are reported sporadically and with encouraging results in isolated cases. However, as we have noted, every effort should be made at operation and in the immediate postoperative period to avoid factors which are preventable and which lead to lymphedema. We have had no experience with the development of lymphangiosarcoma in edema of the arm as has been reported in the literature. References of interest on the subject of this paper not quoted are nos. 16–21 of the bibliography.

## SUMMARY AND CONCLUSIONS

An analysis of 72 cases of carcinoma of the breast treated by radical mastectomy and postoperative X-ray therapy, in which careful measurements of the circumference of the arms were made at intervals following therapy, is presented.

Arbitrarily selecting 2 cm. as a standard at or below which we think edema is not significant, we found significant edema in 36 per cent of the upper arms and 27.7 per cent of the lower.

In comparison with another reported series (Daland) in which but a few cases received irradiation therapy, our figures indicate an increased incidence of lymphedema of the arm following postoperative irradiation.

Post-mastectomy lymphedema of the arm is not necessarily an irreversible process. In 19 per cent of our cases showing significant edema a gradual, spontaneous regression was noted although in some cases residual edema was present.

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(*Continued on page 111*)

# ADENOCARCINOMA IN ONE-HALF OF A UTERUS DIDELPHYS*†

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UTERUS DIDELPHYS by definition is an anomaly of the female generative tract in which there is a septate vagina, double cervix and double body of the uterus. This is thought to be the rarest of the duplicative anomalies of the female reproductive system. Adenocarcinoma of the body of the uterus is the third most common cancer in the female, exceeded only by cervical and breast carcinomas. Adenocarcinoma in a uterus didelphys is rare. Renner[1] in 1934 stated that since 1777 only 9 cases of carcinoma of the corpus associated with malformed uterus have been reported in the literature. In 1937 the Case Records of the Massachusetts General Hospital[2] included the case of a patient with adenocarcinoma in 1 horn of a uterus duplex bicornis. This brings the total to 10 cases of corpus carcinoma associated with anomalous uteri. Grant and Pierce[3] reported a case of didelphys uterus with adenocarcinoma of 1 cervix in 1952. Fly[4] in 1955 reported an additional patient with didelphys uterus and carcinoma of the cervix, bringing the total of these to 18.

The following case is the eleventh case to be reported of uterus didelphys.

## REPORT OF CASE

Mrs. D. W., a 45-year-old Negro nulligravid woman was admitted to the District of Columbia General Hospital on April 11, 1954 with complaints of crampy right lower abdominal pain, menorrhagia and an enlarging lower abdominal tumor. She had first experienced this sharp intermittent pain about 1 year before. The pain radiated to the back and was relieved by rest and aspirin. For about a year her menses had increased in duration from 3 to 6 or 7 days and were associated with the passage of clots and dysmenorrhea. The patient had noted a firm mass in the lower abdomen and intermittent swelling of the legs for several months.

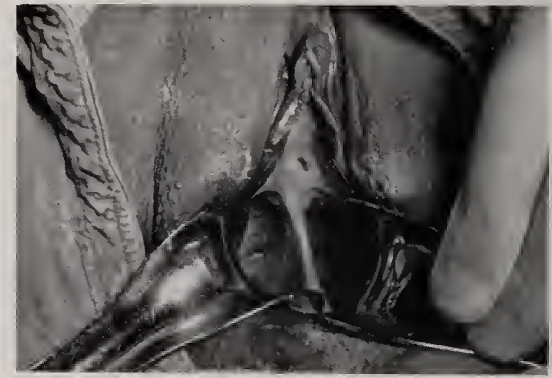

FIG. 1. Vaginal septum with small cervix on each side.

Admission examination revealed a well-nourished patient in no distress. The temperature was 99°F, the heart rate 78, the respiratory rate 18, and the B.P. 180/90. The neck veins were dilated, and the heart was enlarged with a grade 2 systolic murmur at the apex, but there was no evidence of pulmonary congestion. There was a nodular, firm, movable, 20 cm. mass in the lower abdomen. Pelvic examination revealed a vaginal septum with a small cervix on each side (figure 1). The uterus and adnexa were indistinguishable from the previously described abdominal tumor. The lower extremities showed 2-plus pitting edema. Admission impression was (1) fibromyomata uteri, and (2) septate vagina and double cervix with the possibility of further anomalies of the reproductive tract.

Laboratory results were within normal limits with the exception of a normocytic anemia. After transfusion with 1,000 c.c. of blood the hematocrit rose to 33 vol. per cent, the edema disappeared, and the patient was considered a good surgical risk. On the tenth hospital day a combined procedure was done with removal of the vaginal septum from below and a total abdominal hysterectomy and bilateral salpingo-oöphorectomy. Examination of the specimen revealed complete duplication of the uterus and cervix with the right side about 3 times the size of the left (figure 2). Both uteri contained fibromyomata up to 9 cm. in diameter. The endometrium of the right cavity was thick, polypoid and vascular compared to the left, which was thin and yellowish. The operative diagnosis was uterus didelphys and fibromyomata. Pathologic diagnosis included adenocarcinoma of the endometrium of the right cavity (figure 3). The postoperative course was uneventful, and the patient was discharged on the seventh postoperative day. She was seen in the gynecologic clinic on May 15, 1955, at which time no significant findings were noted.

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* From the George Washington University and Georgetown University Services of Obstetrics and Gynecology, District of Columbia General Hospital.

† Presented at the District IV Meeting of the American Academy of Obstetrics and Gynecology in Washington, D. C., April 6, 1956.

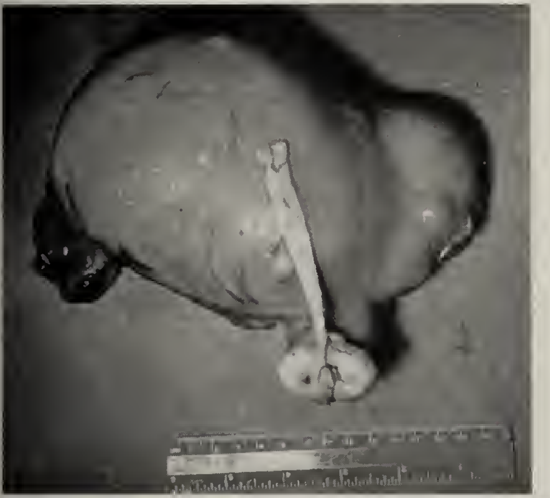

FIG. 2. Complete duplication of uterus and cervix with fibromyomata.

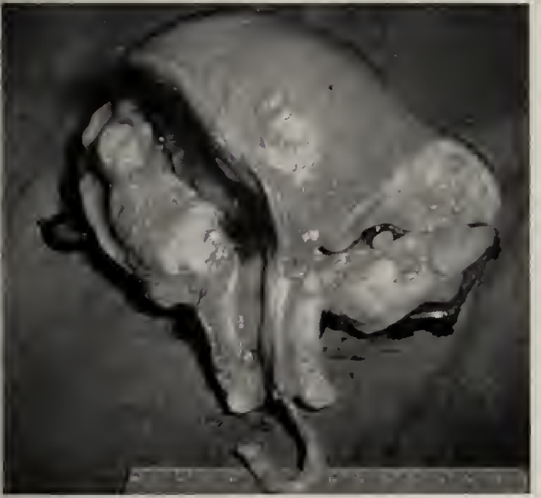

FIG. 3. Adenocarcinoma in right uterine cavity.

Five months later, September 12, 1955, she was readmitted with a chief complaint of pain and swelling of her left inguinal region of about 1 month's duration, with pain and a sanguinopurulent discharge for 1 week. There was a well-healed midline suprapubic scar. In the left inguinal region there was an 8 by 5 by 3 cm. firm, tender, fixed granulomatous mass with a thin purulent exudate on the surface which was believed to be an infected granuloma, possibly venereal (figure 4). Culture material obtained for bacteriologic study including tuberculosis and fungus infections was negative. The Frei test was negative. The initial biopsy taken in bed showed "acute and chronic granulation tissue." An excision biopsy revealed metastatic adenocarcinoma in the left inguinal lymph nodes. The patient made an uneventful recovery and was discharged on October 11. Unfortunately, she moved to another state and contact was lost.

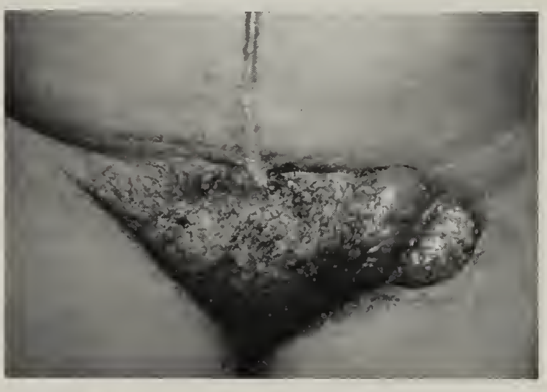

FIG. 4. Mass in left inguinal region (metastatic adenocarcinoma).

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# THE DOCTOR IN LITERATURE

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THE LITERATURE of the present day seems flooded with articles and references to doctors, hospitals, nurses, and allied medical subjects. During the last decade particularly this material has been increasing tremendously until now it seems almost impossible to find any issue of any popular publication which does not have one or more articles dealing with such subjects.

Unfortunately, too much of this writing is uncomplimentary or derogatory to the doctor. There are denunciations of "ghost" surgery, quackery, fee-splitting, and other immoral or unethical practices. This is as it should be, when there is justification in fact, but we become alarmed when the preponderance of emphasis is in this direction at the expense of the many worthwhile accomplishments of the physician. This is not to deny that there is much literature today which deals kindly with the doctor. This we gratefully acknowledge and appreciate, but truly it does seem that there is much more of derogatory nature than warranted by the circumstances of our day.

Reflections of this nature have led me to some further study as to the position of the doctor in the literature of other days. This has led to some (to me at least) very interesting observations.

In order to insure brevity in a study such as this and to prevent digression into numerous closely related subjects, it is necessary to set certain rather definite limitations. Therefore, in this paper the title, Doctor, will refer only to persons known to be, or presumed to be doctors of medicine; the doctors mentioned or discussed will, with but few exceptions, be characters either fictitious or real which are actually mentioned in literature. The exceptions will be a few authors who are doctors themselves. No literature of the last decade is considered. The purpose of the paper will not go beyond the citing of instances of the doctor's appearance in literature, and the facts relating thereto, and any conclusions which may be drawn, based on the facts presented.

The doctor appeared as a character in literature as early as several centuries B.C., and has continued to appear, at various intervals at least, up to the present time. Theocritus of Syracuse, who lived about 280 B.C., mentioned his friend Nicias, the physician, several times in his writings.[1] Pilpay wrote a fable about a doctor several centuries B.C.,[2] and Nicarchus in about 30 A.D. wrote many epigrams directed at doctors.[3] The physician is mentioned in the Old Testament[4] and also in the New.[5] Chaucer[6] has a doctor tell a tale. Many times since then the doctor has put in his appearance in literature, and more examples will be cited later but to avoid repetition will not be given here. His appearances are comparatively infrequent and often only as a very minor character, brought in merely to develop a point of the plot, as, for example, the doctor who appears but a few times in Shakespeare's *Macbeth*[7] says his few lines and is gone. He helps to show the seriousness of Lady Macbeth's mental state. In another case the doctor is awakened at night by a mother searching for her lost child, and the poor doctor, who "grimly rubs his eyes and goes back to bed,"[8] has only served to emphasize the thoroughness of the woman's search. Sometimes, however, the doctor is the main character of the plot, such as Dr. Faust[9] or Dr. Arrowsmith.[10]

Practically every type of writer has mentioned the doctor. Among the poets may be listed Tennyson, Wordsworth and Burns. Novelists include Balzac and Sinclair Lewis (whose proximity in this paper need not indicate a similarity of talents), and among short-story writers are Hawthorne and Stevenson. Marlowe was a playwright, Harvey Cushing a biographer and physician, and Axel Munthe, also a physician, wrote several autobiographical works. Sir Thomas Browne and Oliver Wendell Holmes are two other well-known physician-authors. Besides being mentioned by all these types of writers, the doctor is also mentioned many times in anecdotes and proverbs, many of which are of unknown origin, for example:

> "A physician is an angel when employed, but a devil when one must pay him."—*German.*
>
> "A wise physician is more than armies to the public weal."—Pope.
>
> "A physician is a man who pours drugs of which he knows little into a body of which he knows less."—Voltaire.
>
> "By medicine life may be prolonged, yet death will seize the doctor too."—Shakespeare.
>
> "He who has suffered is the physician."—*Greek*[11]
>
> "Better to hunt in fields for health unbought,
> Than fee the doctor for a nauseous draught.
> The wise for cure on exercise depend;
> God never made his work for man to mend."—Pope.[12]
>
> "But when ill indeed,
> E'en dismissing the doctor don't always succeed."—George Colman the Younger.[13]
>
> "After death the doctor."—Herbert[14]

And, of course, everyone knows

> "An apple a day keeps the doctor away."

One of the most interesting aspects of the subject we are discussing is the type of character given to the doctor by the writers who have mentioned him. Many apparently did not hold him in very high regard and often made him the object of their derogatory remarks and allusions. He was often considered as a "quack," a murderer, a "killjoy," or a scoundrel of some sort. This seemed to be particularly true in very early times; we find such references as these:

> "There was once in a remote part of the East, a man who was altogether void of knowledge and experience, yet presumed to call himself a physician."[2]

These words, written by Pilpay several hundred years B.C., might just as well apply to some of our "quacks" today:

> "A physician after he had felt the pulse of Pausanias, and considered his constitution, saying 'He ails nothing,' 'It is because, sir,' he replied, 'I use none of your physic!' And when the physician said, 'Sir, you are an old man,' 'That happens,' replied Pausanias, 'because you were never my doctor.' "—*Plutarch.*[15]

It is certainly going pretty far if one discredits a physician's skill and morals sufficiently to insinuate that he would kill even a marble god. Yet, Nicarchus, that old author of so many vituperative attacks on physicians of his day, did just that. He said:

> "Marcus the doctor called yesterday on the marble Zeus; though marble, and though Zeus, his funeral is today."[16]

Not content with this masterpiece of denunciation, Nicarchus circulated other stories about the doctors' murderous inclinations. He tells that the astrologer Diophantus forecast the death of Hermogenes, the physician, within 9 months, whereupon, Hermogenes, not to be outdone, forecast Diophantus's death immediately and merely by touching him caused him to gasp out his own life.[16] The falsity of the story is suspected when we learn that Lucilius told a different version, perhaps even more impressive. In his version he said: "Diophantus, having seen Hermogenes the physician in sleep (a dream), never woke again, though he wore an amulet."[17] Anyone could catch Lucilius up on that one, for how could he know that Diophantus saw Hermogenes in a dream, if he never awakened? Another of Nicarchus's tales was that "Agelaus killed Acestorides by an operation; for 'poor man,' he said, 'he would have been lame for life'."[17] Some of our "mercy-killers" or proponents of euthanasia of the present day might have gotten the idea there. Most of the very early references which I could find seemed to refer to the doctor in much the same manner as in the examples given. Whether the doctors of that day were really as bad as they were pictured, I would not venture to say. Perhaps good doctors just weren't mentioned or characterized.

"Quack" doctors have existed for a long time, and Burns,[18] the Scottish poet, had the misfortune to encounter one once. He immortalized the fellow in literature, and we hope diminished his practice by writing a poem about him, in which he satirized him severely.

The idea of "getting away" with something in spite of the doctor's advice is not new, for in the early part of the nineteenth century a poet wrote:

> "Yes, social friend [his cigar], I love thee well
> In learned doctor's spite;
> Thy clouds all other clouds dispel,
> And lap me in delight."[19]

As a further example of ridicule or fun-making at the doctor's expense, let us take the words of Dr. Oliver Wendell Holmes,[20] who, though he was a physician, will probably be remembered more for his humorous writing than for his professional work.

> "When lawyers take what they would give
> And doctors give what they would take."

A characterization of the doctor often found is that of the mystic, frequently having some supposed alliance with black magic and the Devil. Dr. Faustus in Marlowe's version of the play[9] sells his body and soul to Satan for 20 years of supernatural power. Other versions vary the bargain, but the character remains much the same. A certain Dr. Heidegger had a book of magic which, when disturbed by a servant, on one occasion caused a skeleton to rattle, the picture of a young lady to come to life, and a bust of Hippocrates to say, "Forbear." This strange doctor was reputed to hold consultations with this same bust of Hippocrates, and his most famous experiment was one in which he caused several of his elderly friends to become young again for an hour by drinking a potion of his own making.[21] Dr. Jekyll was a fine, upstanding doctor and a gentleman, but when his other personality took possession of him he was Mr. Hyde, the most terrible fiend one could imagine. This classic example of a dual personality came about by the almost supernatural experimentation of Dr. Jekyll.[22]

Fortunately, all the doctors in literature are not murderers, fiends, and fakes. A fair percentage, perhaps even a majority, especially in the more recent writings, are pictured as the very finest men, of high moral character, good social position, and good professional standing. References to them are tender and respectful, as "Luke, the beloved physician"[5] and "Solempnely, this noble doctour deere."[23]

There are several beautiful characterizations of the country doctor, and one of the best is Balzac's Benassis.[24] He is one of the leading men of the community, does many things to help the people besides doctoring them, and always holds up the highest ideals before them. His honesty is exemplified in his severe denunciation of the usurer Taboreau.[25] The love and respect which the country-folk bore for him and the confidence they had in his skill are shown by the words of Fosseuse, a young girl patient of his. She said:

> "Oh yes, Monsieur! And there are many people in the district like myself, who would gladly cut themselves in pieces for him. But he who cures others has something within that nothing can cure.... Who could have wounded a man like him?—the true image of the Good God on earth! I know many here who believe their wheat grows better if he has passed by the fields."[26]

As an example of the hard-working doctor, in love with his profession and willing to dare all for the sake of it, Sinclair Lewis's Dr. Arrowsmith[10] is good. He climbs rapidly in his profession, works unselfishly and skillfully, and accomplishes immeasurable good, but only with great cost and sacrifice on his part. He is a credit to man and the medical profession. Another good doctor is Spearman's Dr. Bryson,[27] about whom it was said that it was no wonder he had the faculty for attaching his friends to him when one considered all the trouble he took to do things for others. Sir William Osler, who was a real doctor and not a fictitious character, is characterized in a most complimentary manner by his biographer, Harvey Cushing.[28]

The events pictured in connection with the physician are usually sad, such as the scene shown in Tennyson's poem, *In the Children's Hospital*,[29] or weird, such as the occasion on which Axel Munthe visits the family stricken with the plague and finds the rats gnawing on the dead bodies.[30] Sometimes the incidents are humorous, as the experience of Axel Munthe as the Ghost in Hamlet.[31] When the doctor has effected a cure, the occasion is a happy one.

Thus we have seen that the doctor appears in literature of various kinds, by various types of authors, and at various times. He is characterized as almost everything from the lowest fiend to an individual only slightly lower than God, and life as associated with his presence may be either sad, weird, amusing, or happy. His social position may be excellent or disgraceful, and his professional standing may be low, ordinary or high.

It is perhaps scant comfort to note that the disparagement bemoaned in our introductory remarks is not confined to modern times but is found also in antiquity. Some satisfaction is to be gained from the general impression that in literature, at least, the doctor is more often considered above the average in talent and ability, even though he may have gained these attributes through supernatural machinations rather than by intelligent study or may use them malevolently instead of benevolently.

As a closing observation let it be said that in all the research done in the preparation of this paper, only one reference was found to a female doctor.[32]

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(*Continued on page 112*)

# President's Page

## HEALTH LEGISLATION—1957

It was reported that when the new session of Congress was only a few days old, 70 bills of direct concern to the medical profession had been dropped into the hopper. This large number of bills is ample evidence of the social consciousness of our population in matters pertaining to their health. Probably most of these bills will receive little or no consideration, but there are always serious potentialities for good and bad in such a situation.

It seems certain that a revised version of a health insurance program for Federal workers will be submitted to the Congress for its approval. Effort has been made to develop a program which is acceptable to the Blue Shield Plans, commercial carriers, and Federal employees unions—and, we hope, *to the medical profession.*

Proponents of the Jenkins-Keogh bill, which permits tax deferment on retirement plans for self-employed people, have been most active. This plan is supported by the American Medical Association, the American Dental Association, and the American Bar Association, among others.

It behooves us as physicians to keep ourselves informed in regard to recent health bills and to exercise our influence, both individually and collectively, in support of or opposition to legislative programs which vitally affect our social and economic future.

Ralph M. Caulk

# Editorials

## "I AM CONFIDENT..."

In accepting the appointment as Director of Public Health for the District of Columbia, I am not unmindful of the scope of the responsibilities inherent in this position. The activities of the Department encompass a wide range of subjects and procedures required to maintain the public health of the community. In many of these areas I have only a superficial knowledge of the activities entailed. It shall be necessary for me, therefore, to make a detailed study of the entire Department in order to become thoroughly familiar with all of its bureaus and activities. Fortunately, the Department is well staffed with a group of highly qualified individuals well versed in their respective fields. These individuals will carry on admirably during the transition period.

At this time I have no program to present to the community. While making a study of each bureau of the Department, I shall endeavor to achieve maximum efficiency in carrying out my responsibilities. The Department will make every effort to achieve this goal.

The public health of a community is the concern of every member of that community. The community has a right to know what is being done and to express itself as to what it wishes accomplished. In this connection I expect to work closely with the organized medical and dental professions, the medical schools, the voluntary agencies, and other interested representative groups. In this area there are many governmental agencies concerned with the field of public health. Also, there are national and local organizations, and many persons outstanding in their respective fields that are concerned with public health. Many of these agencies and individuals have contacted me with assurance of coöperation and have offered their services and assistance. For this I am most grateful. I intend to take full advantage of these offers. Furthermore, I am confident that, with coöperation between the Department and the various community agencies, we will attain the success that we are all striving for.

Before accepting this appointment I stated publicly that I had no formal academic training in public health. However, I believe that I have some broad concept of this area of medical practice, having worked in this Department for nearly 20 years. During this period I have learned a great deal from my able predecessors and from my association with this field. I am sure that my past experience, particularly in administration, will be of inestimable value to me.

The Department of Public Health is faced with a challenge: to progress or to remain static. We accept this challenge, and we shall endeavor to give the community a Department of Public Health of which it can well be proud.

Daniel Leo Finucane, M.D.
*Director, District of Columbia*
*Department of Public Health*

*Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.*

# THE USE OF HYPNOSIS IN MEDICAL PRACTICE

Medical interest in hypnosis has waxed and waned over the centuries. At present we are passing through a period of heightened interest in this subject. Physicians in general—and psychiatrists in particular—have been flooded by inquiries of all sorts. Some of the recent increased interest may have been stimulated by the late (but not lamented) furor over Bridey Murphy, but this is by no means the complete explanation.

Wolberg[1] has recently described the situation in a colorful but accurate analogy:

> "Hypnosis has been compared to an enterprising prostitute who is persuaded, from time to time, to abandon her sordid life and to saunter into the open boulevards of respectability, only to encounter repudiation. Eventually she returns to her habitual covert haunts. Historically, hypnosis has resembled an unhappy strumpet, enjoying brief bursts of popularity followed by an inevitable descent into relative oblivion.
>
> "During its phases of decline hypnosis has survived largely as an exhibition instrument, being employed clinically in a casual way, with little or no structured design. At such times its practitioners carry a sense of apology for the use of a vehicle that traditionally is so contaminated with supersitition and magic. Then, largely because of the urgent need for a dramatic and abbreviated form of psychotherapy in an emergency condition like war, hypnosis is exhumed from the abode of extinct methodologies, and its rise again becomes momentarily extravagant."

One symptom of the "momentarily extravagant" rise has been the great increase in the number of courses in hypnosis being offered to physicians, dentists, and other interested parties. Recently many physicians received a circular advertising a Caribbean Cruise Conference on Hypnosis!

Locally, the physicians and dentists of the Washington area have received notices of several courses in hypnosis during the past year. Fees ranged from $125 and up, depending on their length. These courses, often quite entertaining, were usually given by skilled laymen whose principal prior success in hypnosis had been experienced on the vaudeville stage. The Washington setting was usually some local hotel, and responsible medical supervision was conspicuous by its absence.

This problem was called to the attention of the Committee on Mental Health in the spring of 1956. After considerable thought and study a resolution on hypnosis was submitted to the Executive Board. This resolution, which the Board unanimously approved on December 4, 1956, was submitted as follows:

"In view of the fact that hypnosis has a recognized place in the medical armamentarium, making it potentially useful as well as potentially hazardous in the treatment of certain disorders, the following resolution is proposed:

" 'WHEREAS, There are certain risks associated with the use of hypnosis and hypnotic technics in the practice of medicine and dentistry, and

" 'WHEREAS, Such risks can only be fully understood and met by members of the medical profession; therefore be it

" '*Resolved*, that the clinical teaching of hypnosis and hypnotic therapeutic technics to students of medicine and dentistry as well as to practicing members of these professions be conducted under recognized medical or dental auspices, as is the practice in other branches of therapeutics.' "

It is hoped that this resolution will give much needed guidance to members of the Society who are interested in this subject.

All this concern about hypnosis may cause the medical reader to ask, "To what extent is hypnosis now being used?" Among those who practice the healing arts, dentists, it is commonly conceded, use hypnosis most frequently. A fair number of obstetricians and anesthesiologists also use it but probably fewer than might be suggested by the publicity which the subject has inspired. Relatively few psychiatrists now use hypnosis. A recent survey conducted by the Washington Psychiatric Society was answered by 172 (over half) of its members. Only 13 of this group stated that they still used hypnosis—and of these 13 the majority used it "occasionally" or "in selected cases only." This seems to confirm the general impression that many psychiatrists who used hypnosis in the past or during wartime emergencies use it less and less as their experience grows and as their knowledge about its shortcomings increases.

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[1] WOLBERG, L. R.: Current practices in hypnotherapy, in Fromm-Reichmann, F., and Moreno, J. L., editors: Progress in Psychotherapy. New York: Grune, 1956, pp. 217–33.

There is no doubt that hypnosis will continue to have a definite, but limited, place in medicine. Recently the AMA Council on Mental Health devoted a good part of its 1956 Conference to this subject in an attempt to define more precisely the place of hypnosis in medical practice. Although the report of the Council is still in process of preparation, preliminary discussion emphasized the need for high level research and teaching in all aspects of hypnosis in its relationship to medicine. It is encouraging to note the serious interest of the AMA in this problem. The great care and thoroughness exercised thus far give promise that the AMA report in its final form will serve as a highly useful guide to all physicians.

Zigmond M. Lebensohn, M.D.
*Chairman, Committee on Mental Health*

## EMOTIONAL FACTORS IN TRAFFIC SAFETY

A few months ago a top level official of a national organization of automotive engineers stated that doctors generally had maintained an aloofness from participation in efforts to solve traffic problems. It is not our purpose to debate the validity of this statement, but certainly it doesn't apply to Washington doctors. The Traffic Committee of the District of Columbia Medical Society has coöperated with the Police Department and the Traffic Bureau for several years.

Since last June it has actively supported the District Commissioners' Traffic Advisory Board in its efforts to establish a Psychiatric and Psychological Clinic to examine automobile drivers who are repeated violators of traffic regulations or who are repeatedly involved in accidents. It was proposed that these recidivists be referred by the courts and/or the Director of Traffic to such a clinic for physical, mental, and emotional study. The results of these coöperative activities were recently announced in the newspapers.

The National Institutes of Health of the United States Public Health Service has awarded George Washington University a grant of money for the planning phase of a Psychiatric and Psychological Clinic to be operated as a research unit, using District drivers referred by the courts and the Director of Traffic as clinical material. After the research project is completed, the District Commissioners and their Traffic Advisory Board plan to take over and operate the Clinic as a permanent part of the Traffic Bureau. The objectives and scope of such a clinic will put the District of Columbia at the forefront of a national attack by the medical profession on the traffic problem.

Let us face it! Anything that causes 40,000 deaths and a million and a half injuries a year is of grave medical concern. It is a problem that dwarfs the morbidity and mortality of poliomyelitis. In the year 1954, considered an epidemic year, there were approximately 37,000 cases of poliomyelitis in this country, resulting in 937 deaths. It might also be noted that in 3 years of war in Korea approximately 36,000 American troops were killed. These comparative figures alone dramatically emphasize the seriousness of the traffic problem.

H. S. Hoffman, M.D.
*Member, Executive Committee, D. C. Commissioners' Traffic Advisory Board*

# In and Out of Focus

BY THE OBSERVER

***Our New Health Officer***

The appointment of Dr. Daniel L. Finucane as the District's Director of Health, to succeed Dr. Daniel L. Seckinger, came as a pleasant surprise to his many friends in the medical profession. Rumor had it that an "outsider" was to be chosen, it being said that he would bring to the Health Department a fresh point of view and a vigorous and objective leadership. Apparently, if this report was true, the District Commissioners did some sober thinking before arriving at a decision. As a result, they decided that Dr. Finucane was their man.

It isn't often that an appointee accepts such an important post as head of the District's Health Department so reluctantly as did Dr. Finucane. He told the Commissioners he wasn't a candidate for the position; in fact, didn't want it. He was content, he said, to continue as Superintendent of Glenn Dale Sanatorium, a post he has filled so ably for many years. But the Commissioners were insistent that he possessed the required experience and abilities they were looking for. Under the circumstances Dr. Finucane could hardly do anything else but accede to their wishes, which he did.

Dr. Finucane's new assignment is far from being a sinecure. In fact, it is about as difficult, and in some ways as frustrating, a post as there is in the public health field. The reasons for this are well known to most readers of this column, among them being dependence upon Congress for financial support. Funds have been hard to come by from Congress, with the result that projects which would place our Health Department among the best in the country have often been neglected or delayed until the need for them became so obvious that something had to be done. Whatever the circumstances, the Director has all too often found himself in the middle of an unpleasant controversy in which he has come off second best. This situation might have been more palatable to him if the compensation for his services were commensurate with his responsibilities.

Happily, there is another side to this picture, that is, the opportunity afforded the Director to overcome obstacles which are quite unique. Solid accomplishments, in your Observer's opinion, are not impossible, even in the present situation, provided the new Director, at the beginning of his administration, points out the deficiencies which exist and what he proposes should be done about them. Having done this, his leadership will be tested, and let it be said that in this respect physicians who know Dr. Finucane are certain that he will not be found wanting.

Needless to say, the new Director could meet the above requirements and more, and it would not be enough to guarantee the desired results. Vitally essential is the sympathetic understanding and support of the Congress, the District Commissioners, and the people of the District of Columbia. Last, and certainly not least, are the loyalty and coöperation of his fellow physicians. They can do more than they realize to win for him the confidence of all segments in the community.

Dr. Finucane is well aware that he can count on our Society's wholehearted support. The organization's leaders have known him a long time and have a high regard for his capabilities, both as a physician and an administrator. His calm self-assurance and sound thinking have impressed all who have worked with him. The Society then not only wishes Dr. Finucane well but assures him it will do all in its power to make certain that his administration is a success.

### *II. The Executive Board*

"ARTICLE III, SECTION 1. The Executive Board shall carry on the ordinary business of the Society with all of the powers of the Society itself, subject to the Constitution and By-laws and to the action of the Society at any regular or special meeting.

"SECTION 2. Wherever a matter of general policy is involved, whether originating in the Executive Board or referred to it by the Society, the question shall be submitted to the Society as a whole for action with the recommendation of the Executive Board, and the membership shall be notified of said question in the usual manner.

"SECTION 3. All committee appointments by the President shall be subject to confirmation by the Executive Board.

"SECTION 4. The Board shall have charge of the 'Medical Annals of the District of Columbia' (i.e., the official publication of the Society) and shall appoint the editor, associate editors, and managing editor of said publication, from time to time, for such term as the Board deems best.

"SECTION 5. At each business meeting, the Chairman of the Board shall inform the Society of the matters considered by the Board and the disposition thereof during the period prior to said meeting and subsequent to the last report, so that the Society shall be kept fully informed at all times of the activities of the Executive Board.

"SECTION 6. The Chairman of the Board shall make an annual report in writing of the activities of the Board for the preceding year and shall submit for the approval of the Society the budget for the ensuing year, which said report and budget shall be filed and shall become part of the records of the Society."

As stated in this column in the January issue of the MEDICAL ANNALS, the presently constituted Executive Board was created by an amendment to the Constitution and By-laws early in 1938. The Board came into being largely because of the controversy which engulfed the organization about that time, taking over the duties of what had been known as the Executive Committee. This Committee, consisting of some 30 members, had been found unwieldy and ineffective, largely, it was said, because it had become a debating society.

The present Board consists of 7 members, 4 elective, 1 of whom is elected in May of each year to hold office for a term of four years. Other members of the Board are the President, President-elect, and Senior Delegate to the American Medical Association.

Since its establishment, the Board has carried on with apparent satisfaction to the membership. On occasion, the opinion has been expressed that the turnover in the Board membership has been too slow and that it might well be enlarged. Those who disagree point out that the primary reason for the substitution of the Board for the Executive Committee was the inefficiency of the latter, due to its size and rapid turnover in personnel. The soundness of this position, they insist, has been more than vindicated by the accomplishments of the last 18 years.

Undoubtedly, much of the Board's prestige with the membership is due to the fact that it does not exceed the authority granted it under the Constitution and By-laws. For example, where matters of "general policy" are concerned it has always been conscientious in seeking the Society's approval of its recommendations. There have been times when expediency would suggest the advisability of the Board's accepting the responsibility itself. However, succeeding Boards have agreed that they can only retain the confidence of the membership if they scrupulously adhere to the rules laid down for their operation.

This does not mean that the "ordinary business" carried on by the Board is just routine. Those who have served on the Board in one capacity or another will testify that their experience was an eye-opener and a liberal education in the conduct of the affairs of a modern medical society. While there is no substitute for such an experience, your Observer will endeavor, to the extent that space allows, to describe as best he can what goes on before, during, and after a Board meeting.

First of all comes the preparation of the agenda. This is usually the task of the Secretary, who has had turned over to him the recommendations of committees, reports, communications, and other items of business which should come before the Board. Usually, the President, the Chairman, or a member of the Board has some item or items that he wishes presented.

Meetings of the Board are, with few exceptions, held on the fourth Monday of the month. An agenda is sent to each Board member a week in advance of the meeting. Where possible, copies of the material to be considered are enclosed, providing members an opportunity to familiarize themselves with matters to be taken up. This also helps to expedite the sessions, which are at best long enough anyway. They usually begin at 8 p.m. and seldom conclude much before midnight.

Attendance at Board meetings has been unusually good, absences being infrequent. Meetings are presided over by the Chairman, who sees to it that the proceedings do not lag. Items on the agenda are taken up in the order listed in the notice sent members unless it is agreed that there is reason for a change. The following list of actual items considered at a recent meeting is illustrative of the variety of matters the Board must consider:

### Report of the Finance Committee

At each meeting the Chairman of the Committee, who is usually the President-elect, reports on expenditures since the previous meeting. At this meeting it happened that expenditures for the past 2 months had been reviewed by the Committee and found in order. The Chairman, speaking for the Committee, recommended approval. The Board concurred.

Also submitted by the Chairman were recommendations that expenditures for painting the rear of the building at 1718 M Street and for the Society's membership in the U. S. Chamber of Commerce be approved. The Board concurred.

### Progress Report on Negotiations with Department of Defense on Dependents' Medical Care Program

Communications had been received from Mr. Warren E. Magee, Society's legal counsel, relative to the Society's participation in this program, which he approved, and from Dr. Donald Stubbs, President of Medical Service of the District of Columbia, stating that, as requested by the Society, the Service would act as its fiscal agent with respect to the Dependents' Medical Care Program.

Negotiations with the Department of Defense were still in progress and no final agreement had been reached. It appeared the negotiations had reached a stalemate, but some hope was held that a common ground could be found.

### Appointment of D. C. Director of Health

President Caulk reported that, at the invitation of Commissioner David B. Karrick, he had participated in a conference to consider the selection of a new Director of Health; however, he could not disclose the conclusions reached until later.

### Legal Opinion re Joint Resolution Adopted by Sections on Pathology and Laboratory Medicine and Otorhinolaryngology

The opinion of the Society's legal counsel, with respect to the joint resolution of these Sections regarding hospital procedures, was considered. The Board directed that copies be sent these Sections with the request that they advise the Board of their reaction.

### Memorandum from Dr. William P. Herbst, Jr., re Dangerous Drug Act

Dr. Herbst was of the opinion that the Society should take steps to have the recently enacted Dangerous Drug Act amended. The memorandum was referred to the Committee on Public Policy for its consideration.

### Eye Bank and Research Foundation

The proposed Eye Bank and Research Foundation, to be sponsored by the Lions International Clubs of Greater Washington, had been approved by the Section on Ophthalmology, which recommended Board approval. The Board concurred.

### D. C. Trade, Business or Professional License Tax

Several hundred calls had been received at the Society's Executive Offices from members protesting this tax. The matter was referred to the Committee on Public Policy for its recommendations.

### Proposed Musical Program to Be Sponsored by the Society

Dr. Richard H. Todd, President of the Doctors' Symphony Orchestra, asked that a meeting be arranged in which representatives of the Orchestra, the Medical and Dental Societies, the Woman's Auxiliary to the Medical Society, and the Graduate Nurses' Association would participate for the purpose of discussing the presentation of a major musical work by the Orchestra and a chorus in December, 1957, the chorus to be composed of members of the organizations represented. The Board endorsed the contemplated project and voted to authorize the President to appoint members to represent the Society.

### Group Life Insurance for Society Members

Dr. Todd also submitted a communication, together with supporting data, setting forth benefits to members under a group program. The Board authorized the President to appoint a special committee to investigate this proposal and to submit recommendations.

### Increased Costs of Production of Medical Annals

A letter from the Waverly Press stated that the cost of the Medical Annals would be increased approximately 11 per cent beginning January, 1957. The Board took no action, pending consideration of this matter by the Editorial Board.

### Activities and Recommendations of Committees

The following committees had recommendations to offer: the Grievance, Medical Ethics and Professional Conduct, and Program committees. These were discussed at length and all of them finally approved.

### Report on the Meeting of the Southern Medical Association

The Secretary submitted a final report on the Society's participation in the Annual Meeting of SMA, held at the Sheraton-Park Hotel, in Washington, D. C., on November 12–15, 1956.

### Membership Report

This item included a vote on applicants recommended for election by the Board of Censors; also the granting of membership transfers and the acceptance of resignations.

### Miscellaneous

This item is a catch-all. Usually a number of matters requiring the Board's attention are received at the Society's Executive Offices too late to be listed as separate items on the agenda.

As stated above, this agenda is of a pattern for other meetings throughout the year except in January, when annual financial reports and the budget for the coming year are considered. These reports are accepted and the budget is adopted with such qualifications and changes as are indicated with the understanding that they will be submitted to the Society for its adoption.

The day following a Board meeting minutes of the meeting are transcribed from stenographic notes. Actions taken by the Board are carried out by the President, the Chairman, or the Secretary, unless they are in the "general policy" category, when they are held for the next business meeting of the Society. The amount of work and time required in implementing Board actions depends, of course, on the nature of the subject matter.

Although there is much to confer about between regular meetings, generally speaking, the situation is pretty well under control without special sessions.

No one who dislikes organization work would want any part of service on the Executive

Board. On the other hand, those who have a liking for it will find it a satisfying opportunity to render real service, not only to the profession but to the community.

★

***A New Era*** With the adoption of Medicare (Dependents' Medical Care Program), organized medicine entered upon a new era. At least that is the opinion voiced by many physicians, among them a number in the District of Columbia. Not that the new program is in itself of too much significance, but it has established a precedent which may have ramifications that no one can now predict with any degree of certainty. However, there would seem little doubt that this is only the first of a series of arrangements under which medical societies will contract with the Government for the services of their members on an agreed upon fee basis.

What this really amounts to is that medical societies will henceforth become bargaining agents for their members whether they like it or not. Contracts between groups of physicians and prepayment plans, industrial establishments, consumer groups, labor unions, etc., are nothing new. But these are modest when compared to the Medicare program. Under many of these arrangements, professional services have been paid for on a salary rather than a fee basis. True, some years ago a few state medical societies entered into an agreement with the Federal Government to supply home medical care required by veterans on an agreed upon fee schedule. But this also was on a much smaller scale than the Medicare program, where all but two state medical societies have signed contracts with appended full service fee schedules.

Looking back, it is clear that this turn of events was inevitable following the advent of voluntary health insurance plans, which in turn were the end-result of the widespread agitation for compulsory health insurance. In making this observation there is no intention of decrying what has happened. That would not be realistic or justified in the light of what has befallen our society generally. What should be said with utmost emphasis is that a far greater burden has been placed on state and county medical societies than previously existed.

This bargaining role holds many pitfalls for medical societies. One of the most serious is the loss of public confidence through ineptness, avarice, or indifference. Medical societies can, therefore, ill afford to make many mistakes. The situation now existing is indeed a challenge to the medical profession to provide sound and realistic leadership in a comparatively unexplored area.

★

***A Daily Medical Journal*** Many physicians have deplored the flood of medical articles currently appearing in newspapers, popular magazines, and other lay periodicals. Although the best of them, they admit, have an educational value, too frequently the information presented serves only to make the layman unduly concerned about his health. The medical profession should therefore not stimulate the dissemination of more medical information for lay consumption but rather insist on greater selectivity. Better still, publication of technical material in nonmedical publications should be discouraged.

Do these views reflect the opinion of the majority of physicians? Not if the activities of the American Medical Association and its affiliated state and county medical societies are accepted as a criterion. With few exceptions, these organizations devote a substantial portion of their programs to various methods of acquainting the public with the contributions of medicine to the maintenance of good health. Their position has been, and still is, that only in pursuing this course is there any assurance that objectionable and misleading medical information will be eliminated. The day is past, they insist, when a health-conscious people will be denied facts about a subject of such vital importance to them as recent advances in medical science.

Whatever position one takes in this situation, there is one point on which there will be little disagreement; that is, that people are far less gullible than they once were about matters pertaining to their health. Quacks, charlatans and nostrums have not been eliminated but they are no longer the menace they once were, thanks in no small degree to the AMA's Bureau of Investigation, which, over a period of many years, has fearlessly exposed fakers for what they are. Enlightened lawmakers too have made their contribution, as have such Government agencies as the Federal Trade Commission and the Food and Drug Administration. Others also deserve recognition for their efforts, notably newspapers, which, in a special way, are deserving of credit.

Not long ago your Observer was looking through bound copies of the *National Medical Review*, which for some years in the late 90's was the official publication of our Society. His attention was attracted to an editorial entitled "A Daily Medical Journal" which appeared in the May, 1893 issue. Under the impression that the editor was seriously proposing a daily journal, your Observer was prepared for a serious dissertation on the subject. However, he soon discovered his mistake, for here is what the editor had to say:

> "A daily medical journal in the City of Washington! This is indeed something novel and interesting. But it is true, nevertheless. It may surprise our out-of-town readers that such is the case, but the old residents know all about it. The daily came into existence some fourteen or fifteen years ago as a newspaper. Seeing the great need of a medical journal in our midst, it has of late years been gradually changing its plans to conform to such a want. Stimulated by the success of the REVIEW during the past year, it now devotes the greater part of its columns to medical matters. Before we reach the close of our second volume we predict *The Washington Post* will come out, fair and square, as a full-fledged daily medical journal. Already column after column of its advertising pages are filled with matter pertaining to the health of the people. We read, in glowing terms, of cures for all kinds of ailments, from cold feet to consumption. Here we read of impotency; loss of vigor; gonorrhoea; syphilis, pennyroyal and tansy pills for women, which never fail; English pennyroyal pills, a sure relief for ladies; errors and indiscretions of youth corrected; manhood restored; small and weak organs enlarged; the gentleman's friend, and a syringe free; a whole column of this same kind of choice medical literature!
>
> As newspapers furnish only what the people want to read, at least so they say, then it must follow that the public is extremely grateful to our successful city daily for furnishing such choice morsels of select reading for our young men and women. It occurs to us the *Post* might be adopted by our School Board as a supplementary reader for our public schools!
>
> We would like to inform our daily that this journal does not take all the advertisements offered it; and it can see no good reason why a daily paper should do so either. When we wish to introduce the Police News into our homes we can purchase a copy with our eyes wide open, knowing just about what we are carrying. But we would not like to be obliged to purchase such a paper. We do feel obliged, however, to bring into our homes the morning paper, and it is hardly fair to us that we must bring with it such objectionable literature as we have quoted above. Give us a clean, wholesome daily, Mr. Publisher, and the heads of thousands of households will rise up and call you blessed."

Times have vastly changed in the 64 years since this editorial was written. It need hardly be said that the only thing that today's *Washington Post* has in common with its ancestor is its name. With respect to advertising, few newspapers are more scrupulous in what they will accept. When the attention of its advertising department is called to an objectionable medical advertisement, either it is eliminated at once or facts are requested to support the objections which have been made. When information is needed and has been supplied, an immediate investigation is made. Not infrequently, the Secretary of the Society receives a call from the *Post's* Advertising Manager regarding the propriety of a recently submitted advertisement.

And so, the "Daily Medical Journal" of the 90's has long since become extinct. This is not only true of *The Washington Post* but of all reputable newspapers throughout the country. Here then is a salute to the publishers, who, having recognized their responsibilities to protect the public health, have made a real contribution to its preservation.

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***A Historic Milestone*** *The Statistical Bulletin of the Metropolitan Life Insurance Company* has frequently been quoted in this column. There is a good reason for this. Few publications, pretentious or otherwise, contain more timely and significant information. For example, in the September, 1956 issue the *Bulletin* reports "that a historic milestone was reached in 1955 when the expectation of life at birth among American wage-earners and their families, as represented by the Company's industrial policyholders, rose to a new high of 70.0 years." The *Bulletin* points out that this was the twelfth consecutive year in which an increase in life expectancy had occurred.

During the period 1879 to 1894 the average length of life of the Company's policyholders was 34 years, less than half of what it was in 1955. Females, as is well known, live longer than males. In 1955 their life expectancy at age 5 was 70.1 years. For males it was 63.9 years, a difference of more than 6 years. The margin, it appears, decreases with the advance in age, but it is still 2½ years at age 65, when life expectancy for females is 15.1 and for males 12.5. Prospects of colored policyholders were less favorable, life expectancy being less by 2 years for males and 4½ years for females.

In an analysis which appeared in the same issue, the *Bulletin* stated that in 1900 only 4.1 per cent of people in the United States were 65 or older. The proportion rose to 8.5 per cent by 1955, so that this age group now accounts for about 1 in every 12 persons in the population. In numbers, those 65 and over increased from 3,100,000 in 1900 to 14,128,000 in 1955.

In 8 states more than 10 per cent of the people were in the age group 65 and over, all of these states being in New England or the Midwest. At the other extreme were states situated in the South and Southwest. Proportions range from 11 per cent in Iowa and New Hampshire to 5.3 per cent in New Mexico. Surprisingly, in Florida, the elders constituted only 9.3 per cent of the population and California, 8.6 per cent, or the average for the country as a whole.

"Meeting the medical needs of the large and growing population of older people in our country is a challenging problem," the *Bulletin* observes. "The incidence of chronic disease and disabling illness is highest in later life, and consequently, the prevalence of these conditions increases as the proportion of older people rises. More and more medical, surgical and hospital facilities and services are being devoted to the health problems at the older ages."

In order to stimulate interest and promote research, the American Medical Association, through its Council on Medical Service, recently established the Committee on Aging. The Federal Government, along with a number of voluntary health agencies, has also stepped up its activities in this field. These efforts, while long overdue, are encouraging.

The situation of the aged as a member of society has too frequently been tragic. Unwanted in business, or his regular vocation, unwanted in the home of his children, he often becomes discouraged, and small wonder. Somehow, a place must be found for him where he will have a feeling of dignity, security, and usefulness.

T. W.

# MEDICARE*

The purpose of the Dependents' Medical Care Act (Public Law 569—84th Congress) is to create and maintain high morale throughout the uniformed services by providing an improved and uniform program of medical care for members of the uniformed services and their dependents.

Of particular significance to physicians in the private practice of medicine is that section of the Law which is intended to provide the spouses (wives and dependent husbands) and children of members of the uniformed services with medical care from civilian sources in addition to care in uniformed services medical facilities. It is intended that, except for specified items to be paid for by the patient, the services which are provided under the Law will be furnished by physicians participating in the program without cost to the dependent. The private physician participating in the program will receive the amount established in the local Schedule of Allowances, or his usual charge, whichever is less.

The active interest and coöperation of privately practicing physicians throughout the United States and its territories in organizing their efforts to provide their services in the discharge of the Government's responsibility to dependents of members of the uniformed services is living testimony of the integrity and responsibility of the medical profession in maintaining the American way of life under a free enterprise system.

## I. DEFINITIONS

1. The Uniformed Services are: The Army, the Navy, the Marine Corps, the Air Force, the Coast Guard, the Commissioned Corps of the Public Health Service, and the Commissioned Corps of the Coast and Geodetic Survey.

2. A Member of a Uniformed Service is: A person appointed, enlisted, inducted or called, ordered or conscripted in a uniformed service who is serving on active duty or active duty for training pursuant to a call or order that does not specify a period of 30 days or less (sometimes referred to as the Sponsor). This program does not provide benefits for such person but only his lawful wife, dependent husband and legitimate children.

3. Dependent Eligible for Civilian Medical Care: Includes only lawful wives and dependent children of uniformed servicemen (or the lawful husband of a servicewoman if he is in fact dependent on her for over one-half of his support).

Dependent children are defined as unmarried legitimate children (including a legally adopted child or stepchild) who have not passed the 21st birthday. Dependent children more than 21 years old are eligible for benefits if they are incapable of self-support because of mental or physical incapacity which existed prior to their becoming 21 years of age, or if they are enrolled in a full-time course of study in an institution of higher learning as approved by the Secretary of Defense or Secretary of Health, Education and Welfare, and have not passed the 23rd birthday. The institutions which are approved as accredited are those currently listed by the regional accrediting associations or national professional association by the U. S. Office of Education, Department of Health, Education, and Welfare. The current reference list is "Education Directory 1955–56, Part 3, Higher Education," which may be obtained from the U. S. Government Printing Office, Washington 25, D. C. (Other dependents, such as parents, widows, etc., and the dependents of retired and deceased members of the uniformed services are eligible for medical care at Government expense only in military service facilities.)

4. Physician or Surgeon: Means a person who is legally qualified to prescribe and administer all drugs and to perform all surgical procedures.

5. In-hospital Professional Services: Means care by a physician in a hospital which is operated in accordance with the laws of the state in which it is located; which provides diagnostic and therapeutic facilities for surgical and medical diagnosis, treatment and care of injured and sick persons by or under the supervision of staff physicians; and which continuously provides 24-hour nursing service by registered graduate nurses.

Specifically excluded is professional care in institutions which are primarily a place of rest, a place for the aged, a place for treatment of drug or alcohol addiction, a nursing home, a convalescent home, or an institution operated by the Federal Government or any agency thereof.

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* Reprinted from a Handbook for Physicians prepared by Medical Service of the District of Columbia, which will be responsible for the fiscal administration *only* of Medicare. Medical Service is not responsible for determining fees or modifying them in any way. All fees are negotiated by the Medical Society of the District of Columbia.

6. OUTPATIENT PROFESSIONAL CARE: Means care by a physician in the patient's home, the physician's office, in a hospital which does not qualify for in-hospital professional service benefits, or the outpatient department of a hospital clinic or dispensary.

7. DIAGNOSIS: A determination of the existence and nature, or absence, of disease or injury by history with physical and mental findings, including physical examinations and the utilization of medically accepted diagnostic procedures, e.g., laboratory tests and pathology and X-ray examinations.

8. MATERNITY AND INFANT CARE: Medical and surgical care for the mother incident to pregnancy including prenatal care, delivery, postnatal care, including required care of the infant while hospitalized, and treatment of complications of pregnancy.

9. ELECTIVE MEDICAL AND SURGICAL TREATMENT: Medical or surgical care that is desired or requested by the patient which, in the opinion of the attending physician, is not medically indicated, e.g., surgery solely for cosmetic purposes.

10. CHRONIC DISEASE: This term shall be construed to include non-acute conditions and disabilities in which the prognosis indicates long continued duration of the ailment.

11. NERVOUS AND MENTAL DISORDERS: This term means those conditions classified as neuroses, psychoneuroses, psychopathies, or psychoses.

12. DENTAL CARE AS A NECESSARY ADJUNCT TO MEDICAL OR SURGICAL TREATMENT: Dental care determined by the attending physician and dentist to be required for the proper treatment of a medical or surgical condition.

13. ADJUNCTS TO MEDICAL CARE: Prosthetic devices and prosthetic appliances such as hearing aids, spectacles, orthopedic footwear, and similar medical supports, or aids.

14. ADJUNCTS TO DENTAL CARE: Removable or fixed prosthetic or fixed prosthodontic restorations and similar dental supports or aids.

15. SCHEDULE OF ALLOWANCES: Professional fees for payment of physicians' services applicable to a local area negotiated with a state medical society and approved by the Executive Agent for the Government. Where such a schedule of allowances has not been negotiated and approved, the Executive Agent may provide a Schedule of Allowances for use in payment of physicians' services.

## II. ELIGIBILITY OF DEPENDENT

1. When the physician exercises reasonable care and precaution in accepting evidence of eligibility of a person claiming benefits as a dependent, claims for services rendered will be honored. Exercise of reasonable care and precaution entails:

a. Examination of the dependent's identification card.

b. Satisfaction that the person presenting the identification card is the person described on it.

c. Obtaining a certifying signature by the dependent, serviceman, parent, or acting guardian on the Government claim form. Such person making willful misrepresentation of identity or status will be subject to Federal prosecution.

2. Prior to July 1, 1957, identification will be established by the best available means, including DD Form 720, and such other means of identification currently provided by the uniformed services.

3. "Dependents Authorization for Medical Care" (Form DD 1173) will be the primary form of identification. Use of this form will be required after July 1, 1957. By that date it will have been furnished to all eligible dependents. Attention is drawn to the fact that this form will indicate dependents who are entitled to care in military facilities, as well as those entitled to care in civilian facilities. Only those dependents shown to be entitled to care in civilian facilities may receive benefits under this program.

4. Dependents Authorization for Medical Care Card (Form DD 1173) will be issued for a maximum of two years, and will be reissued upon reënlistment, permanent change of station, changes in dependency status, advancement to officer status, change of dependent's status, certification of loss, etc.

Form DD 1173 is to be surrendered whenever a new card is issued, upon its expiration date, whenever one or more dependents become ineligible, etc.

Note that this form will show an expiration date. The Government is not obligated to pay for care provided after this expiration date.

5. ELIGIBILITY OF THE DEPENDENT WILL TERMINATE

a. Upon the expiration date shown on Form DD 1173.

b. Upon retirement or separation from the service of a uniformed serviceman.

c. When the dependent otherwise becomes ineligible, e.g.:

1. Divorce
2. Marriage of a child
3. Attainment of age 21 by a child or, if attending an institution of higher learning, attainment of age 23, or if the child leaves the institution of higher learning.
4. Death of the uniformed serviceman.

In the event of (b) or (c) above, the Government's responsibility will cease when notice is provided to the physician by the Government, or if the physician learns in a positive manner that one of the situations described has come into existence.

It is not the physician's obligation to investigate the divorce records, for example, or to verify positively evidence of enrollment in an institution of higher learning in the absence of reasonable indications of fraud or misstatement. It is the physician's obligation to take note of reliable information coming into his possession.

The Government may notify a physician directly when eligibility of a dependent terminates for reasons set forth above. In this event, the Government's obligation terminates 24 hours after midnight of the day on which notice is received. Such notice will come from the Department of the Army in Washington, and the signer will be identified as a Contracting Officer or his representative.

The Government may also notify the State Medical Society or its fiscal administrator that a certain named dependent is receiving treatment by a named physician and that eligibility terminates. In this event it is the responsibility of the State Medical Society or the fiscal administrator to notify the physician as to the day and hour at which Government liability ceases.

When death of a uniformed serviceman occurs while a dependent is receiving professional services (or if a dependent is hospitalized as a result of being in the same accident which proved fatal to the serviceman) the dependent *may* be transferred to a military facility as soon as the physical condition of the patient permits. Arrangements for such transfer will be made by the Government, and will be made at Government expense. In the event such a patient refuses to transfer to a military facility, Government liability will cease on the date on which the transfer is to be made.

The Government (State Medical Society or its fiscal administrator at the instruction of the Government) may notify a physician under any other circumstance that eligibility of a dependent has been terminated, and such notification will specify an effective date.

## III. AUTHORIZED SERVICES

1. IN-HOSPITAL PROFESSIONAL SERVICES PROVIDE FOR

a. PHYSICIANS' AND SURGEONS' fees according to the Schedule of Allowances for treatment of contagious diseases, surgical condition, and acute medical condition, including acute exacerbation or acute complication of chronic disease. (Services are limited to 365 days per hospital admission.)

b. CONSULTANTS. If consultant services are required for proper care and treatment of the patient and the attending physician certifies as to the requirement, such care is authorized. Consultation fees shall be according to the Schedule of Allowances.

c. DIAGNOSTIC AND THERAPEUTIC TESTS AND PROCEDURES authorized by the attending physician, and accomplished during a period of hospitalization.

d. PRE- AND POSTOPERATIVE CARE. The Schedule of Allowances payable to a physician or surgeon for treatment in the hospital of a bodily injury or for a surgical procedure shall include pre-hospitalization care and normal aftercare following a period of hospitalization.

2. OBSTETRICAL AND MATERNITY SERVICES—AND INFANT CARE

a. COMPLETE OBSTETRICAL AND MATERNITY services shall include prenatal care, delivery, and postnatal care in a hospital, office, or home. Payments for prenatal care, delivery, and postpartum care shall be made to the physician performing the respective service in accordance with the local Schedule of Allowances

b. Allowances are authorized for laboratory tests, pathology or radiology examinations, and other procedures performed or authorized by the attending physician in the management of the pregnancy. In instances of home or office confinements, payments are not authorized for the purchase or rental of beds, bassinets, or similar equipment, nor for the services of private duty nurses, and the patient shall pay the first $15 of charges in connection with the delivery. This amount will not be collected if the patient is subsequently hospitalized for the same maternity condition.

c. INFANT CARE. Necessary or required infant care shall be provided during the period of hospitalization following delivery. If the infant requires further hospitalization following delivery, such care is authorized as a continuation of the original admission. As a part of complete maternity service, newborn infant care outside of a hospital, including immunization, is also authorized at Government expense for a maximum period of 60 days following delivery but not to exceed a total of two (2) visits by a physician or to a physician after discharge from the hospital.

3. OUTPATIENT PROFESSIONAL SERVICES. Although the Dependents' Medical Care Act provides primarily for professional services during hospitalization and does not permit medical care normally considered to be Outpatient Professional Care at Government expense, certain limited benefits are authorized as follows:

a. BODILY INJURIES. Scheduled allowances for the treatment of bodily injuries when a patient is not hospitalized, including diagnostic and therapeutic tests and procedures up to $75, authorized by the attending physician, are limited to treatment of fractures, dislocations, lacerations and other wounds. The patient shall pay the first $15 of the total charges for each different cause or accident for which treatment and services are rendered, except that multiple injuries to the same person resulting from a single accident shall be considered as one injury for payment of the maximum required fee ($15) by the patient.

b. DIAGNOSTIC TESTS AND PROCEDURES PRIOR TO HOSPITALIZATION FOR SURGERY OR INJURY. Payment is authorized in an amount not to exceed $75 of scheduled fees for necessary diagnostic tests and procedures performed or authorized by the attending physician prior to hospitalization for the same bodily injury or surgical procedure for which hospitalized.

c. DIAGNOSTIC TESTS AND PROCEDURES FOLLOWING HOSPITALIZATION FOR SURGERY OR INJURY. Payment is authorized in an amount not to exceed $50 at Government expense for necessary tests and procedures performed or authorized by the attending physician for proper aftercare of the same bodily injury or surgical procedure for which hospitalized.

The monetary limitations on diagnostic tests and procedures above are intended only to define the liability of the Government under the stated conditions and in no way modify, alter, or affect the fees for individual procedures contained in the Schedule of Allowances, nor do they restrict the physician in the performance or authorization of necessary tests or procedures.

The monetary limitations (b) and (c) above may be exceeded only in special and extraordinary cases provided that the physician authorizing the tests and procedures, the charges for which exceed the amounts specified above, submits a special report which shall be reviewed by the Medical Society's physician review board. This board will make appropriate recommendations to the Government which may authorize such additional payments.

d. VISIT FEE FOR PATIENTS HOSPITALIZED UNDER THE CARE OF ANOTHER PHYSICIAN. If the physician initially responsible for care of a patient for a condition for which the patient is hospitalized terminates his professional care prior to or upon hospitalization, and does not continue to provide professional care in the hospital because the care of the patient is transferred to another physician, he shall be authorized the fee for a single professional visit prior to hospitalization in accordance with the local Schedule of Allowances. This subparagraph does not apply to obstetrical and maternity services.

4. SERVICES NOT AUTHORIZED:

a. TREATMENT OF CHRONIC DISEASES. (Nonacute conditions and disabilities in which the prognosis indicates long-continued duration of the ailment. The term includes, but is not necessarily limited to, nervous and mental diseases, arthritis, tuberculosis, degenerative diseases of the cardiovascular system, residuals of poliomyelitis and other degenerative diseases of the nervous system, severe injuries to the nervous system including quadriplegia, hemiplegia, and paraplegia, and blindness or deafness requiring definitive rehabilitation.)

This exclusion does not preclude admission for the treatment of acute exacerbations or complications of such chronic diseases wherein active and definitive medical or surgical treatment is required, in the judgment of the attending physician, such as thoracic surgery for tuberculosis, tendon transplant in cases of disability residuals of poliomyelitis, diabetic acidosis, or cardiac decompensation in chronic rheumatic fever.

b. NERVOUS AND MENTAL DISORDERS (conditions classified as neuroses, psychoneuroses, psychopathies, or psychoses).

c. SERVICES NOT RELATED TO INPATIENT CARE IN A HOSPITAL. Except for treatment of bodily injury, maternity care, infant care during first 60 days, and one visit fee for treatment leading to hospitalization under care of another physician.

d. ELECTIVE MEDICAL AND SURGICAL TREATMENTS (medical or surgical care that is desired or requested by the patient which, in the opinion of the attending physician, is not medically indicated, such as surgery solely for cosmetic purposes).

e. DENTAL CARE (except as a necessary adjunct to medical or surgical treatment).

f. AMBULANCE SERVICE.

g. PROSTHETIC DEVICES, HEARING AIDS, ORTHOPEDIC FOOTWEAR, OR SPECTACLES. No benefits are provided for the sale or rental of hospital equipment such as crutches, wheel chairs, etc., for use after discharge from the hospital.

NOTE: In acute emergencies of any nature, which are a threat to the life, health, or well-being of the patient, care is authorized. Emergency treatment for a condition or service otherwise excluded is authorized only pending completion of arrangement for care elsewhere.

## IV. PROCEDURES

1. IDENTIFICATION.

A patient requesting the services of a private practicing physician at Government expense under the Dependents' Medical Care Act should present appropriate identification to the physician, and the physician should be completely satisfied that the dependent is eligible for care in accordance with the law.

2. COMPLETION OF CLAIM FORM (STATEMENT OF SERVICES).

When the physician is satisfied that the patient is eligible for care at Government expense, the Government form "Statement of Services Provided by Civilian Medical Sources," two copies of DA Form 1863 should be completed in the following manner:

SECTION I. *Identification of Patient.*—To be completed from information obtained from the dependent's identification card. (Prior to July 1, 1957, blocks 6 and 7 need not be completed if the dependent has not been issued the identification card—Form DD 1173.)

SECTION II. *Identification of Sponsor Member of Uniformed Services on Active Duty.*—To be completed from information obtained from the dependent's identification card or other means of identification provided by the uniformed services.

SECTION III-A. *Certification of Dependent, Accompanying Parent, or Acting Guardian.*—To be signed by the dependent or an accompanying parent or other person acting as guardian of the patient. Acting guardian in this case may be any person to whom the patient's dependency to the member of the uniformed services on active duty is well known and who will so certify subject to prosecution under Federal law for a false or fraudulent statement in this respect.

SECTION III-B. *Additional Certification Required of Dependent Receiving Obstetrical and Maternity Care.*—Obstetrical and maternity patients must certify that there has been no change in physicians during any one trimester of maternity care or for postpartum care for which benefits are claimed under the form being completed. If there has been such a change, details should be furnished with regard to the date the trimester or postpartum period began, the number of visits to or by each physician during such period, and the dates of such visits.

SECTION IV. *Medical Care Furnished, Diagnoses, Services Rendered, and Charges.*—To be completed by the physician as follows:

Item 15.—Do not check:

☐ Hospital-Patient was . . . etc.

☐ Hospital-Patient was not . . . etc.

(This information is to be provided by the hospital submitting a statement of hospital services provided.)

The attending physician should check the appropriate block:

☐ Attending physician . . . hosp.

☐ Attending physician-not hosp.

to indicate whether the service was rendered in or out of the hospital. The anesthetist, radiologist, pathologist, assistant to surgeon, or other consultant, as the case may be, should check the appropriate block to indicate the type of service for which payment is being claimed.

Item 16.—The name and address of the physician submitting the statement of services should be clearly indicated to help assure proper addressing of payment by Medical Service of the District of Columbia. If you have been issued a code number for this program, it should be indicated also.

Item 17.—Physicians attending a patient over a long period of time may claim payment prior to final discharge of the patient by submitting a separate statement of services for each period for which payment is claimed. If the Statement of Services is being submitted for the entire period for which payment is claimed, the block signifying the entire period should be checked. If another statement for care of the same illness is contemplated or has been submitted previously, the appropriate block should be checked.

Item 18.—Indicate date service was rendered. If the Statement of Services is intended to cover the entire period of care, the physician should indicate the date care was first provided and the date the patient was discharged from further care by the physician. If the statement covers a partial period, the period covered by the statement should be indicated.

Item 19.—Only one block should be filled in. The physician should indicate the number of visits, hospital or office as appropriate, which are billed separately from those included in a surgical fee.

Item 20.—All diagnoses should be recorded, and the terminology of Standard Nomenclature should be used. As indicated on the form, further information is requested with regard to whether a secondary diagnosis is an infection or complication.

Item 21.—This should not be filled in by the physician. Medical Service of D. C. will code the diagnosis in this space.

Item 22.—The physician should list all services he has performed and the city and state in which such service was performed for which the dependent is entitled to care at Government expense under the Dependents' Medical Care Act, including those services for which the dependent may be responsible for initial payment subject to reimbursement (diagnostic procedures related to care of bodily injuries outside the hospital or related to eventual hospitalization for surgery or treatment of bodily injuries), or is responsible for initial payment of the first $15 (services related to bodily injury or delivery outside the hospital).

Item 23.—This should not be filled in by the physician. Medical Service of D. C. will code the procedure in this space.

Item 24.—For each service described under the item titled services rendered, the physician's usual charge or the amount provided for by the local Schedule of Allowances, whichever is less, should be indicated. Payment to the physician will be predicated upon this amount.

Item 25.—The total of the charges listed in the preceding item should be indicated in this space.

Item 26.—Payment by the patient for physician services under the Dependents' Medical Care Act is required for the first $15 in case of delivery outside the hospital or outpatient hospital and physician services provided for treatment of bodily injuries (fractures, dislocations, lacerations and other wounds). When an injury is treated in the outpatient department of a hospital, the $15 paid by the patient should be indicated in this space.

Item 27.—The amount indicated as "Total Charges This Statement," less the amount Paid or Due From Patient, will be the amount due from the Government for services rendered by the attending physician or surgeon.

Item 28.—The date the Statement of Services is prepared for submission to Medical Service of D. C. should be indicated in this space.

(*Continued on page 112*)

# On the Lighter Side

The D. C. Medical Bowling League has completed the first half of the 1956–57 bowling season with the Casualty team, captained by Dr. Alfred Dibbs, well out in front and going strong with 35 wins and only 13 losses (pinfall 23,915), thanks to their anchor man and League-leading high average (116) Paul Duffy. Mr. Kenneth Clark has also contributed with his 105 average. Other team members who have helped are Dr. John P. D'Angelo (97), Dr. Henry H. Canton (96), and Dr. Dibbs (90).

In second place, by the grace of forfeits and handicaps, is the Doctors team, captained by Dr. W. Robert Perkins (86). They have won 32 and lost 16, with a total pinfall of 21,054. Other members and their averages follow: Dr. Allen S. Lloyd (85), Dr. Aaron H. Gerber (74), Dr. Benjamin Golden (90), Dr. Sherman A. Thomas (85), Mr. James Carter, Secretary of the League (81), and high average man on the team, Dr. Ray N. Brown (91).

In third place, and always a tough competitor, is Sibley #1, with 30 wins and 18 losses (pinfall 24,083). The team is composed of Dr. Francis X. Richardson (106), Dr. George L. Ball (105), Dr. Richard J. McNulty (102), Dr. John F. Finnegan (100), Dr. Joseph F. Belair (95), and Dr. William H. Clements (95).

Fourth place has been captured by the dark horse Beta Dentists, with a won 27 and lost 18 record. The team has Dr. Stanley D. Hollis (95), Dr. Gerald J. Steinberg (95), Dr. Harry Sembekos (94), Dr. Irvin Douglas (94), Dr. Hector Castro (91), Dr. Anthony Culotta (86), Dr. William Von Eiff (80), and Dr. Charles Carroccio (74) as bowling members. Pinfall 20,347.

Safely lodged in fifth place, with 27 wins and 21 losses, is Sibley #2, captained by old reliable Dr. George H. McLain (99). Fellow bowlers are Dr. J. Phelps Hand (101), Dr. Willis B. Morse (100), Dr. Raymond C. Kirchner (97), Dr. Sollie Katzman (90), Dr. Ralph Barnhard (97), and Dr. Howard E. Newman (97). Pinfall for Sibley #2 is 23,585.

Suburban bowlers (pinfall 24,100) and Columbia (pinfall 23,246) are tied for sixth place with 26 wins and 22 losses each. Dr. S. Paul Porton has his motley Suburban pin-spillers doing a fine job, namely, Dr. Millard F. Ottman (101), Dr. P. Paul Andrews (99), Drs. Robert B. Irey (97) and Hugh W. Irey (92), Dr. James B. Faris (92), and their star bowler Dr. Andrew J. Betz (106).

The Columbia team, last year's winner-take-all champions, is struggling along with a lower individual average, which is reflected in its skimpy pinfall. High average at this writing is shared by Dr. Clyde P. Reeves (101) and Dr. J. Earl Kadan (101). Dr. D. Franklin Hodge with a 97 average is next highest; then Dr. A. J. B. Connolly (95), Dr. Eugene J. McDonald (93), Mr. Irwin T. Sealfon (92), and Dr. Clayton H. Hixson (85).

Children's team, captained by the strong right arm of Dr. Frank S. Bacon (98), has the highest pinfall in the League—24,445 pins, but has won only 25 games while losing 23. This is due partly to the high number of pins they "give away" each game as a handicap, and partly because their high average bowlers have an occasional off-night. Such stalwart pin-spillers as Dr. Alvin I. Kay (107), Dr. George A. Resta (105), Dr. Israel Kessler (105), Dr. Ambrose H. Cook (99), and Dr. Thomas J. Pekin (98) have combined to spill the highest number of pins (1,649) for a three-game set in the League.

Number nine in the standings, with 23 won and 25 lost (pinfall 22,846), is Emergency. Its captain, and Vice President of the League, Dr. Harold H. Hawfield, is bowling a very respectable 101 average along with team-mate Dr. Maurice vanKinsbergen. Dr. Hamilton P. Dorman has improved this year and is banging the pins at a neat 102 average. Dr. Edgar N. Brauner has 93, Dr. Forrest V. Schumacher 96, Dr. Neville K. Connolly 82, Dr. Frank E. Gibson 92, and Dr. Parker S. Dorman 83.

Prince Georges, which is usually much higher in the League standings, has fallen upon evil days and is mired in tenth place with a won 22–lost 26 record and a 22,836 pinfall. Some of the big guns on that team are Dr. Frederick E. Musser (108), Dr. Charles Hageage (106), Dr. William Brainin (102), and Mr. T. Kendell Twigg (102). Dr. Leonard S. Berman, always unpredictable when bowling, has a 92 average; Dr. John W. Perkins, 97; Dr. William Schnitzker, an 89.

In eleventh place, with a won 21–lost 27 record and a pinfall of 22,294, is George Washington. Captain Blaine H. Eig has an excellent 108 average; Dr. Bernard A. Fitzgerald (107), Dr. Clifton R. Gruver (99), Dr. Saul Zukerman (95), Dr. Georges F. McCormick (93), and Dr. Daniel J. Abramson 87. George Washington's ace bowler is Mr. Frank Baiers, third in the League high averages with a professional 110.

The second newcomer to the League, the Alpha Dentists, is in twelth place with 19 won and 26 lost—pinfall 19,030: Dr. A. Victor Cercell (96), Dr. Louis B. Wolfe (94), Dr. James J. Greeves (92), Dr. J. Keaveny (86), and Dr. Milton M. Kogan (84).

The Providence team, with 20 wins and 28 losses, has a pinfall of 22,335, thanks to its stellar bowler, Dr. Robert Levine, who has a fancy 112 average, which is the second highest average in the League. Others are Dr. Alan R. Crain (100), Dr. Montague A. Cashman (97), Dr. Harold Heiges (91), Dr. James W. Choate (90), and Dr. James A. O'Keeffe (76).

Last place honors have been bestowed on Garfield by the other 13 teams of the League. Garfield has won 17–lost 31 with a pinfall of 18,043. This is a good team with good bowlers, but they have lost too many games by forfeit, thereby holding up the League from the cellar. Such capable bowlers as Dr. William G. Cushard (103), Mr. John E. Grubb (100), Dr. Ashby W. Smith (97), Dr. Duane C. Richtmeyer (95), and Captain Elmer Klein (86) could make any of the other teams bite their alley dust if they could all bowl regularly.

The Georgetown team, captained by good bowler Dr. Roy G. Klepser, gave up the bowling ghost midway of the first half of the season due to poor bowler attendance. We all miss Roy and Gordon MacDonald, and Dee Parkinson, and Alfred Wilson, and David Feltman, and Lawrence Rapee; and we sincerely wish that they could revitalize their bowling spirits by rejoining the League next year.

J. Earl Kadan, M.D.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**The Patient Speaks—Mother Story Verbatim in Psychoanalysis of Allergic Illness.** Harold A. Abramson, M.D., Associate Attending Physician and Chief of the Allergy Clinic, The Mount Sinai Hospital, New York City; Research Psychiatrist, Biological Laboratory, Cold Spring Harbor; Consultant, Huntington Hospital; Assistant Clinical Professor of Physiology, Columbia University; Consultant (Psychology), Department of the Army. Price, $3.50. Pp. 239. New York: Vantage Press, 1956.

**Principles of Clinical Electrocardiography.** Mervin J. Goldman, M.D., Assistant Chief of the Medical Service and Cardiologist, Oakland Veterans Administration Hospital, Oakland; Assistant Clinical Professor of Medicine, University of California School of Medicine, San Francisco. Price, paper, $4.50. Pp. 310, illustrated. Los Altos, Calif.: Lange Medical Publications, 1956.

**The Philosophy of Medicine.** William R. Laird, M.D. Price, $3.00. Pp. 64. Charleston, W. Va.: Education Foundation of West Virginia, Inc., 1956.

**Clinical Examinations in Neurology.** Members of the Sections of Neurology and Section of Physiology, Mayo Clinic and Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Price, $7.50. Pp. 370, with 76 illustrations. Philadelphia: Saunders, 1956.

**Ciba Foundation Symposium on Paper Electrophoresis.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H-W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $6.75. Pp. 224, with 74 illustrations. Boston: Little, 1956.

**Ciba Foundation Symposium on Bone Structure and Metabolism.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $8.00. Pp. 299, with 121 illustrations. Boston: Little, 1956.

# News and Personals

## MEETINGS—Past and Future

Of special interest to Washington physicians will be the **Sectional Meeting of the American College of Surgeons,** to be held in Washington, March 18–21, at the Sheraton-Park Hotel. Many members of the D. C. Medical Society are participating in this meeting, some of them as members of the Committee on Arrangements, and others by presentation of papers. Dr. W. Ross Morris, Chairman of the local Advisory Committee on Arrangements, will preside at the opening session, March 18.

The following papers will be presented by Washington physicians:

### *Monday, March 18*

Trauma Symposium—Where to Begin and What to Do for the Patient with Multiple Injuries: Dr. Robert J. Coffey, *presiding.* "Role of the Urologist in the Management of the Patient with Multiple Injuries," Dr. Roger Baker; "Management of Head Injury in Patient with Multiple Injuries," Dr. Hugo V. Rizzoli; and "Injury to the Face with Special Emphasis on the Orbit," Dr. Robert E. Moran.

Symposium on Vascular Surgery: Dr. Frederick C. Fishback, *presiding.* "Surgical Treatment of Obliterative Arterial Disease," Dr. Charles A. Hufnagel; "Aortic Aneurysms," Dr. Owen Gwathmey; "Sympathetic Surgery in Vascular Disease," Dr. J. Ross Veal.

Panel on Surgical Problems Complicating Pregnancy: Dr. John L. Parks, *moderator.* Collaborators: Drs. Paul S. Putzki and Raymond T. Holden.

### *Tuesday, March 19*

Panel on Surgical Management of Advanced Cancer. Collaborator: Dr. Murray M. Copeland.

Symposium on Surgery of Hyperfunctioning States: Dr. Robert J. Coffey, *presiding.* "The Hyperfunctioning Thymus," Dr. Brian Blades; "Surgery of the Hyperfunctioning Adrenal Gland—Cortex and Medulla," Dr. Walter H. Gerwig.

### Special Program in Obstetrics-Gynecology

"Diagnostic X-Ray Procedures in Obstetrics," Dr. John W. Walsh; "Diagnostic X-Ray Procedures in Gynecology," Dr. Robert H. Barter.

Symposium on the Management of Ovarian Tumors: "Diagnosis and Management of Surgical Emergencies Associated with Ovarian Tumors," Dr. J. Keith Cromer; "Benign Tumors," Dr. Andrew A. Marchetti; "The Pathologist's Impression of Ovarian Tumors," Dr. Theodore Winship.

Symposium on Obstetric Hemorrhage in Late Pregnancy: "The Abnormal Placenta," Dr. John L. Parks.

### *Wednesday, March 20*

"Postoperative Intestinal Obstruction," Dr. William S. McCune.

Panel on Surgical Problems in Elderly Patients: Dr. Harry H. Kerr, *presiding.* Dr. Brian B. Blades, *moderator.* Collaborator: Dr. Edward J. Stieglitz.

Symposium on What's New in Surgery: "Some Causes of Failure in Definitive Surgery in Primary Operable Cancers," Dr. Robert R. Smith.

**The Third Biennial Postgraduate Course in Ophthalmology** at Walter Reed Army Hospital will be held, March 18–20, in conjunction with the Sectional Meeting of the ACS. Dr. Marshall M. Parks will present a paper, March 18, on "Vertical Muscle Motor Defects: Diagnosis and Treatment."

On March 20, Dr. G. Victor Simpson will contribute a paper on "Recurrent Hemorrhage into the Vitreous: Differential Diagnosis." A Clinicopathological Conference, presented by Drs. Lorenz E. Zimmerman and Benjamin Rones, will conclude the program.

A one-week **Intensive Course in the Diagnostic Use of Radioiodine** ($I^{131}$) will be given, March 18–22, at Georgetown University Medical Center. This course, open to members of the Medical Society, will meet AEC qualifications for diagnostic $I^{131}$. Further information may be obtained from Dr. B. J. Duffy, Jr., Georgetown University Hospital, Washington 7, D. C.

**The William L. Keller Lecture,** sponsored by the Surgeon General of the Army, will be held in the

Sternberg Auditorium at Walter Reed Army Medical Center, March 21. The lecturer will be Dr. I. S. Ravdin, John Rhea Barton Professor of Surgery at the University of Pennsylvania. His subject will be "Whither Goeth The Surgeon."

The Department of Legal Medicine of the Medical College of Virginia, the Chief Medical Examiner's Office, and the Virginia Society of Pathology and Laboratory Medicine are sponsoring a **Medico-Legal Workshop** for medical examiners, pathologists and other interested physicians, on Friday, March 29, from 8:00 a.m. to 4:30 p.m., in the Amphitheatre and Baruch Auditorium of the Medical College of Virginia in Richmond. The registration fee is $25.00.

For further information, address Geoffrey T. Mann, M.D., LL.B., Chairman, Department of Legal Medicine, Medical College of Virginia, Richmond, Va.

**The Joint Urological Conferences,** which were scheduled to meet in the various hospitals of the District of Columbia, will be held instead at the Georgetown University School of Medicine, Room 101, on Tuesdays at 8 p.m. The dates for these Conferences are the same as originally scheduled: February 26, March 26, April 30, and May 28.

**The Fifth Annual Interim Scientific Meeting of Phi Lambda Kappa Fraternity** will be held at Desert Inn, Las Vegas, Nevada, March 19–26. The five-day meeting will feature programs and symposiums by specialists in their fields, addressed to the general practitioner. For registration and information, write to Dr. Samuel L. Lemel, National Secretary, Phi Lambda Kappa, 1030 Euclid Avenue, Cleveland 15, Ohio.

**The District of Columbia Dental Society** will sponsor its **25th Annual Postgraduate Clinic** at the Shoreham Hotel, March 10–13. Any inquiries regarding the program or exhibits should be addressed to Mrs. Doris H. Hansen, Assistant Secretary of the Society, 1835 Eye Street, N.W., Washington 6, D. C.

**The Joint Regional Meeting of the American College of Physicians for Maryland and the District of Columbia** was held, January 12, in the Medical Society's auditorium. Dr. Frank G. MacMurray was Chairman of the Committee on Arrangements. Dr. Wallace M. Yater, Secretary General of the College, presided at the opening session.

Washington physicians presented the following papers:

"A Study of Diagnostic Errors," Dr. Edward D. Freis

"Clinical Experience with More Than 100 Patients Treated with Orinase," Dr. Samuel Sugar

"Pulmonary and Cardiac Function in Relation to Chest Surgery," Drs. K. A. Harden, John B. Johnson, H. V. McKnight, and C. Young

"The Significance of Renal Casts—An Internist Looks at the Urinary Sediment," Dr. George E. Schreiner

"Distribution of Radioactive Lipids in Dog and Man," Drs. Benedict J. Duffy, Jr., and David A. Turner

The Medical Society sponsored the second **Course in Disaster Medicine,** January 15, 16 and 17, in the Medical Society's building. It corresponded in material presented to the first course held in May, 1956.

Serving as moderators for the meetings were: Dr. James E. Chapman, January 15; Dr. Arch S. Russell, January 16; and Dr. Edwin C. Mitchell, January 17. All three are members of the Committee on Emergency Medical Service, which sponsored the course.

Speakers the first evening were Lt. Colonel Gerald McDonnel, of the Nuclear Energy Division, Office of the Surgeon General; Lt. Colonel James Brennan, radiologist at Walter Reed Army Medical Center; and Lt. Colonel Joseph D. Goldstein, of the Department of Atomic Casualties Studies, Walter Reed Army Institute of Research.

On January 16, Dr. James P. Schofield, of the Bureau of Medicine and Surgery, Department of the Navy, gave the opening address. In a Surgical Panel on Professional Care of Casualties, moderated by Dr. Thomas E. Bradley of the National Research Council, Dr. William E. Bageant, of Garfield Memorial Hospital, spoke on "Anesthesia and Resuscitation," and Dr. Gordon S. Letterman discussed "Treatment of Burns under Disaster Conditions." Two other papers were presented: "Débridement and Surgical Therapy," Captain Roald N. Grant, Chief of the Surgical Service, U. S. Naval Hospital, St. Albans, New York: "Abdominal Wounds and Body Cavity Wounds," Dr. Vincent M. Iovine. Drs. Letterman and Iovine are both members of the Department of Surgery at George Washington University School of Medicine.

On January 17, Colonel J. E. Fondahl described the D. C. Civil Defense Program, which he directs. The second speaker was Colonel Albert J. Glass, Chief of the Department of Neuro-Psychiatry, Walter Reed Army Hospital. Dr. Edwin C. Mitchell described the MEDS Program.

Dr. S. Ross Taggart, Assistant Deputy Director of the D. C. Office of Civil Defense, moderated a panel discussion relating to the problems of paramedical personnel. Participants in the panel were Dr. Samuel A. Leishear, Chairman of the D. C. Postgraduate Dental Clinic, and Mrs. Josephine Pittman Prescott, Director of the Bureau of Nursing, D. C. Department of Public Health, and Chairman of the Civil Defense Committee on Nursing Service.

**The Jacobi Society** held its regular monthly dinner meeting, January 14, at the Willard Hotel. Scientific papers, limited to 5-minute presentations, were read by members of the Society. The titles and authors of the papers were:

"Chemopallidectomy: A Surgical Technic for the Treatment of Parkinsonism," Dr. Harvey Ammerman; "Radioisotopes, One of Our Newest Diagnostic Tools," Dr. Adolph Friedman; "What the Physician Should Know about Surgical Treatment of Deafness," Dr. Irvin Hantman; "Adrenal Insufficiency in Shock of Myocardial Infarction," Dr. Benjamin Manchester; "Combination Antibiotic Therapy," Dr. Lawrence E. Putnam; "Sulfamethoxypyridazine (Kynex)—a New, Long-acting Sulfa Drug," Dr. Sydney Ross; "Potential Dangers from Topical Cortisone Preparations," Dr. Alvin Seltzer; and "Clinical Experiences with Orinase," Dr. Lawrence Thomas.

**The Section on General Practice** met, January 22, in the Medical Society's Library. The speaker was Dr. Joseph M. LoPresti, Assistant Professor of Pediatrics, George Washington University School of Medicine. His topic was "Newer Aspects of Fibrocystic Disease."

**The Washington Psychiatric Society** met in the Medical Society's auditorium, January 25. The guest speaker was Dr. Robert W. Hyde, Superintendent of Butler Hospital in Providence, R. I. He spoke on "Studies in Community Responses to Returned Home Patients." The discussion which followed was led by Dr. John Clausen, of the National Institutes of Health.

**The Arlington County Medical Society** elected new officers, December 20. They are:

Dr. K. Charles Latven, *President;* Dr. T. A. McGavin, *President-elect;* Dr. Stephen J. Sheehy, Jr., *Vice President;* Dr. W. Leonard Weyl, *Secretary;* Dr. William L. Stone, *Treasurer;* and Dr. Hermann F. Diamant, *Councilor-at-large.*

Drs. Latven, Sheehy and Weyl are Associate members of the D. C. Medical Society.

## GENERAL NEWS

Three members of the District Medical Society will head the **General Surgery Department** of the new **Washington Hospital Center,** now under construction. They are Dr. Crenshaw D. Briggs, presently Chief of Surgery at Emergency Hospital, Dr. Ernest A. Gould and Dr. William H. Ferguson, senior attending doctors at Garfield Memorial Hospital. Dr. Briggs will head the Department, Dr. Gould will be Vice Chairman, and Dr. Ferguson, Secretary.

**Georgetown University Medical Center** has announced the creation of a new post, **Assistant Dean for Coördination of Research.** Appointed to the position was Dr. Walter C. Hess, Professor of Biochemistry and Chairman of the Department of Biochemistry in the Georgetown Schools of Medicine and Dentistry. He will retain his professorship in addition to the assistant deanship. His new duties will include planning of research projects and obtaining grants for such projects. He will also be responsible for integrating individual research projects into the total activities of the Medical and Dental Schools and the University Hospital.

**The Joint Blood Council, Inc.,** is slated to receive $25,000 from the Public Health Service for the first year of a two-year project. This fund will enable the Council to conduct a Nation-wide survey for the purpose of developing standard terminology to describe the work of blood-bank technicians and of determining acceptable standards for use in accrediting blood banks. Dr. Frank E. Wilson, Executive Vice President of the Council, said the survey will be the first real comprehensive analysis of blood banking in the country.

In January, **George Washington University School of Medicine** received a gift of $12,000 from Mr. Joseph H. Himes, President and founder of Group Hospitalization, Inc., to be used as a revolving student loan fund. In accepting the check, Dr. Walter A. Bloedorn, Dean of the Medical School, said the fund would be known as the Joseph H. Himes Student Loan Fund. It will enable students in financial stress to secure assistance, the money to be repaid after they have established their practices.

**The Washington Heart Association** in 1946 allocated approximately $45,000 to D. C. doctors and students, the largest amount it has ever budgeted. Dr. John A. Reisinger, Chairman of the Association's Research Committee, announced, January 7, that the following new projects are being financed by these funds:

Dr. George A. Kelser, Instructor in Medicine, George Washington University School of Medicine, for "A Study of the Relationships of Central Blood Volume and Pulmonary Lung Artery Pressure to Lung Elasticity."

Dr. John M. Evans, Director of the Cardiac Clinics, George Washington University Hospital, for the project, "Transaminase Studies in Pulmonary Infarction."

Dr. Edward D. Freis, Chief of Cardiovascular Research Laboratory at Georgetown University, for the project, "Standardization and Simplification of Corrected Lead Systems in Vectorcardiography and Electrocardiography."

Dr. Harry Y. C. Wong, Assistant Professor of Physiology, Howard University, for a study entitled, "Experimental Atherogenesis in Chicks."

Dr. Walter Booker, head of the Department of Pharmacology, Howard University, for "A Study of the Effects of Adrenosteroids on the Perfused Rabbit Heart and the Dose-Response of Certain Cardiac Drugs during Hypothermia."

Dr. Thomas M. Peery, Professor of Pathology, George Washington University School of Medicine, for a study of the "Cardiovascular System in Animals."

Dr. George E. Schreiner, Director of the Renal Clinic at Georgetown University Hospital, for "A Study of Nephrotoxic Nephritis."

Dr. Frank J. Talbot, of the Georgetown University Hospital Service to D. C. General Hospital, was awarded a one-year fellowship in clinical cardiology. Earlier, grants went to Drs. Joseph W. Still and Joseph H. Roe, of George Washington University, and to Dr. Paul R. McCurdy, of Georgetown University Hospital.

An allocation of $9,700 will apply on last summer's and next summer's program of Association-sponsored stipends to graduate and undergraduate students in medical and related sciences.

**The District of Columbia Dental Society** has voted to admit qualified Negro dentists in its membership. The decision was announced, January 8, at a meeting at the Shoreham Hotal.

## PERSONALS

**Drs. Virgil T. DeVault, Oscar H. Fulcher, and James W. Watts** participated in the Mid-Atlantic Division Regional Meeting of the International College of Surgeons, held at the Greenbrier Hotel, White Sulphur Springs, West Virginia, February 10–13. Dr. DeVault, Medical Director of Foreign Service, U. S. State Department, presented a paper entitled, "Surgery in Many Lands." Dr. Watts, who is Professor of Neurologic Surgery at George Washington University School of Medicine, took part in a Panel Discussion on Whiplash Injuries. Moderator for the panel was Dr. Ross T. McIntire, Executive Director of ICS. Dr. McIntire is an Honorary member of the D. C. Medical Society.

Dr. Fulcher, Professor of Neurologic Surgery, Georgetown University School of Medicine, contributed to a Panel Discussion on the Management of Low Back Pain and Sciatica.

**Captain George N. Raines, M.C., U.S.N.,** Chief of the Neuropsychiatry Branch of the Navy's Bureau of Medicine and Surgery, was elected President of the American Board of Psychiatry and Neurology at its annual meeting in New York, December 9–11. Captain Raines has served as a Director of the Board since 1949 and was Vice President last year. On the Board, he represents the Section on Nervous and Mental Diseases of the

American Medical Association. He is Professor and Director of the Department of Psychiatry at Georgetown University School of Medicine.

**Dr. William P. Argy,** Medical Director of the District of Columbia Society for Crippled Children, has been named a Diplomate of the American Academy of Cerebral Palsy. Dr. Argy has been Medical Director of the D. C. Society since February 15, 1951.

**Dr. Charles A. Hufnagel,** Director of the Experimental Laboratory in Surgery at Georgetown University School of Medicine, took part in a Symposium on Cardiology and Cardiac Surgery, sponsored by the Medical College of Virginia in Richmond, December 12-14. This Symposium was held in connection with the Twenty-eighth Annual Stuart McGuire Lecture Series, presented this year by Dr. Andre Cournand, of New York, Nobel Prize winner. Dr. Hufnagel presented two papers, "The Surgery of Aortic Valvular Disease" and "Vascular Reconstruction."

**Dr. Murray M. Copeland,** Professor of Oncology at Georgetown University School of Medicine, attended the annual meeting of the American Academy of Orthopaedic Surgeons, in Chicago, January 26-28. As part of an instructional course, he gave a lecture on "The Palliative Care of Patients with Bone Metastases." Dr. Copeland also discussed a paper at this meeting presented by Dr. Gerald S. Ahern. Dr. Copeland arrived in Chicago a day in advance of the Academy meetings in order to attend a meeting of the National Committee for the Science Teacher Achievement Recognition Awards Program of the National Science Teachers Association, January 25.

Dr. Copeland was elected Vice Chairman of the Section on Surgery of the Southern Medical Association during its meeting in Washington, November 12-15. Recently he was elected to active membership in The Society of Medical Consultants to the Armed Forces.

In Boston, December 17, he addressed the Boston Orthopaedic Club. His topic was "An Evaluation of Round Cell Tumors of Bone."

**Dr. John A. Reed** was a member of the faculty for the Fifth Postgraduate Course on Diabetes and Basic Metabolic Problems, sponsored by the American Diabetes Association, at the Ohio State University Health Center in Columbus, Ohio, January 30-February 1. Dr. Reed participated in a Panel Discussion on Objectives of Treatment in Diabetes Mellitus. He was also chairman of an afternoon program on "Diagnosis of Diabetes Mellitus."

**Dr. June Carol Shafer,** a member of the Board of Directors of the American Academy of Dermatology and Syphilology, attended the annual meeting of the Academy in Chicago, December 8-13, 1956. In addition to the Board meetings, Dr. Shafer participated in a teaching panel on "The Uses of Radiation in Dermatology." She is an Associate member of the D. C. Medical Society.

**Dr. Donald Stubbs,** President of Medical Service of the District of Columbia and head of Anesthesia at Doctors Hospital, presented two papers before the annual Public Relations Seminar for County Secretaries, sponsored by the Michigan State Medical Society, in Detroit, January 25-27, at the Sheraton-Cadillac Hotel. On December 14 he addressed the New England Society of Anesthesiologists in Worcester, Mass., on the subject of "Health Insurance."

On January 22 Dr. Stubbs was in Baltimore, where he spoke before staff members of the Department of Anesthesia of the University of Maryland Hospital on the subject, "The Anesthesiologist as a Physician."

**Dr. Lucian Bauman and Dr. John P. Adams** are new members of the Professional Vocational Rehabilitation Advisory Council to the District Commissioners. Dr. Bauman will fill the unexpired term of Dr. William J. G. Davis, and Dr. Adams, the unexpired term of Dr. William J. Tobin. Drs. Davis and Tobin were appointed to the Council, April 3, 1956, for a 3-year term.

**Dr. Ralph M. Caulk,** President of the D. C. Medical Society and Senior Attending Radiologist at Garfield Memorial Hospital, addressed members of the District of Columbia Dental Society at a meeting at the Shoreham Hotel, January 8. His subject was "Management of X-radiation by the Physician in Therapy and Diagnosis," which was part of a panel discussion.

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| January 8 | Dr. George Maksim | What Secondary School Pupils Should Know about Health | Association of Secondary School Principals |
| January 13 | Dr. Arthur Sims | Prevention of Psychological Crippling in the Sick Child | Washington Chapter, National Cystic Fibrosis Research Foundation |
| January 16 | Dr. Shirley S. Martin | Miscarriages | WTOP-TV, Donna Douglas Program |
| January 23 | Dr. Naomi M. Kanof | Skin Care | WTOP-TV, Donna Douglas Program |
| January 30 | Dr. William T. Gibb, Jr. | Health Hazards of the Creative Worker | American Public Relations Association |
| February 6 | Dr. Esther A. Nathanson | Menstrual Difficulties | WTOP-TV, Donna Douglas Program |
| February 13 | Dr. Bertha E. Van Gelderen | Breast Feeding | WTOP-TV, Donna Douglas Program |
| February 20 | Dr. Petrena Abbe Shea | Sex Instruction in School | WTOP-TV, Donna Douglas Program |

**Dr. Edgar W. Davis** delivered a paper on "Thymic Cysts" before the meeting of the Southern Thoracic Surgical Association in Miami, Florida, December 7. **Dr. Joseph W. Peabody, Jr.,** was co-author of the paper.

**Major General David N. W. Grant** (U.S.A., Ret.), who retired last June after serving for 5 years as National Director of the Red Cross Blood Program, has consented to serve as a medical officer at a camp for Hungarian refugees in Austria, which is staffed by the American Red Cross.

General Grant was Air Surgeon of the Army Air Force from 1941 to 1946, retiring in the latter year after 30 years of military service. He is an Honorary member of the District Medical Society.

Two faculty members of Georgetown University School of Medicine have received special appointments by the American Heart Association. **Dr. Lawrence S. Lilienfield,** Instructor in Medicine, will be a Research Fellow for a period of two years beginning July 1, 1957. **Dr. Frank A. Finnerty, Jr.,** Assistant Professor of Medicine, was named Established Investigator for a period of five years, also beginning July 1.

**Dr. Lawrence E. Putnam** addressed the medical staff of Veterans Administration (Mt. Alto) Hospital on the subject, "Toxicity of Penicillin," November 10.

**Dr. Phillip M. Stebbing** was recently installed as President of the Eastern Branch Kiwanis Club. Among the new Directors elected were **Dr. Addison M. Duval and Dr. Mansen B. Pettit,** both staff members at St. Elizabeths Hospital.

**Dr. Lester I. Fox,** of Fort Monroe, Virginia, Associate member of the District Medical Society, has been elected a Fellow of the American College of Physicians. In 1956 Dr. Fox was awarded a Certificate of Achievement from the Commanding General of the Continental Army Command.

**Principles of Clinical Electrocardiography.** Mervin J. Goldman, M.D., Assistant Chief of the Medical Service and Cardiologist, Oakland Veterans Administration Hospital, Oakland; Assistant Clinical Professor of Medicine, University of California School of Medicine, San Francisco. Price, paper, $4.50, Pp. 310, illustrated. Los Altos, Calif.: Lange Medical Publications, 1956.

Dr. Goldman has presented a relatively inexpensive primer containing many commendable features. The book is profusely illustrated, with clear diagrams and typical cuts of tracings. Descriptive material is presented in a concise form and kept to a minimum.

The form is conventional. Electrophysiology is well discussed in the introductory chapters. These are followed by sections dealing with abnormalities of the ventricular complex, the arrhythmias, and miscellaneous patterns. The concluding chapter contains a number of tracings for the reader to interpret. A glossary is included.

Following each entity a summary accompanied by brief illustrations is found. This is a worthwhile feature. Esophageal leads are shown to be of distinct advantage in the diagnosis of posterior wall infarctions and arrhythmias.

Shortcomings are few for a book of this type. However, one feels that the author passes over entirely too briefly the study of the electrocardiogram in infants and children, thus implying its relative unimportance. An error of omission is found in the section on right bundle branch block. The author states that this type of block is found in congenital lesions involving the septum but does not indicate to which septum he is referring. Right ventricular conduction disturbance is very common in atrial septal defects and its presence is a valuable adjunct to the clinical diagnosis, while it is conspicuous by its absence in ventricular septal defects.

On page 116 is the dogmatic statement, "It is impossible to diagnose right ventricular hypertrophy in the presence of right bundle branch block from the electrocardiogram alone." This opinion should justly produce considerable disagreement.

Dr. Goldman adheres to the unitarian concept of the atrial arrhythmias and the theory of accelerated conduction, and discusses these theories only.

Vectorcardiography is mentioned briefly and is still regarded by the author as a research tool. A minor disappointment is the bibliography, which is short and confined largely to the work of Prinzmetal.

This text can be recommended, with the above reservations, to the medical student and to the busy practitioner who finds time a limiting factor in the perusal of a more exhaustive text.

Robert T. Kelley, M.D.

**Diseases of the Breast.** C. D. Haagensen, M.D., Professor of Clinical Surgery, The College of Physicians and Surgeons, Columbia University; Director of Surgery, The Francis Delafield Hospital, Columbia-Presbyterian Medical Center. Price, $16.00. Pp. 751, with 404 figures and 25 charts. Philadelphia: Saunders, 1956.

This book is written by one of the better known authorities on conditions of the breast. It is based not only on the author's personal experience, but upon all the data accumulated at Columbia-Presbyterian Medical Center over a 40-year period (1915–1955).

The work is divided into 30 well-outlined chapters. It is easy reading and contains a minimum amount of quotations and referrals to reviews of past literature. The illustrations are numerous, plain and well selected.

The work itself does not differ from other accepted texts on the subject. It does, however, offer rather up-to-date chapters on Radiotherapy of Breast Carcinoma, and the Hormonal Treatment of Mammary Carcinoma.

Throughout the entire text the author campaigns strongly for education of the patient in self-examination of the breast.

The book is recommended to those who require, or wish an up-to-date, well written text on Diseases of the Breast.

Chas. I. Warfield, M.D.

**Of Water, Salt and Life. An Atlas of Fluid and Electrolyte Balance in Health and Disease.** Lakeside Laboratories, Inc. Price, $7.50. Pp. 70, with 31 color plates. Milwaukee: Lakeside Laboratories, 1956.

This title introduces us to a volume of elaborately colored plates, which attempt to simplify the water and salt changes occurring in the human physiology. The technic used is basically a good one, starting off with a division of the fluid compartments into vascular, interstitial and intercellular. These 3 compartments are presented in different colors in a very easily understood pictorial representation. Alterations of these compartments are carried along in the same color themes in successive plates depicting various pathologic states. Some of the subjects covered are acid-base balance, function of the nephron, changes in congestive heart failure, sodium and potassium metabolism, and pharmacology of diuresis.

This manual, to my mind, represents an oversimplification of many of the theories described. Some of the theories and mechanisms described are just a little too smooth for me to accept as being true. Many of the intermediary steps in some of the theories are inadequately explained and are subject to serious questioning. Many of the interpretations, I am sure, will not meet with general agreement among other investigators.

All in all, this work represents a very simple, graphic explanation of water and salt metabolism. It could readily serve as a simple reference source, particularly for students interested in capsule-like information. It cannot be considered as a basic reference for students interested in a more detailed discussion of the pathologic physiology concerned.

LAWRENCE J. THOMAS, M.D.

**Roentgen Signs in Clinical Diagnosis.** ISADORE MESCHAN, M.A., M.D., Professor and Director of the Department of Radiology at the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina; formerly Professor and Head of the Department of Radiology at the University of Arkansas School of Medicine, Little Rock, Arkansas, with the assistance of R. M. F. FARRER-MESCHAN, M.B., B.S. (Melbourne, Australia). Price, $20.00. Pp. 1058, with 2216 illustrations. Philadelphia: Saunders, 1956.

The authors are to be congratulated on achieving a text in radiology which presents the fundamentals of that specialty, with the emphasis on the systematic presentation of objective criteria. This text represents a logical sequel to their "Atlas of Normal Radiographic Anatomy."

The aim throughout the book is to give the student the solid foundation of a discipline toward a field which, without this discipline, can never be mastered to any degree. Whether the reader is to make radiology his chosen field, is concerned with X-ray interpretation only in regards his specialty, or looks at an occasional film, a careful study of this text and the application of the principles the authors enumerate will give considerable proficiency in X-ray interpretation. Instead of attempting to teach interpretation from the viewpoint of radiographic changes manifest in specific diseases, the authors use the approach of the well trained radiologist: first, an objective description of the findings, with particular reference to their aberration from normal, and, second, an impression, or differential diagnosis based upon specific criteria correlated with the clinical aspects of the case.

The entire field of diagnostic roentgenology, exclusive of special examinations, is covered adequately in 31 chapters. The first several chapters are devoted to technic, physics, and other fundamental subjects. Nine chapters cover the osseous system thoroughly with similar adequate coverage for the cranium, chest, and abdomen. The degree of detail, considering the size and scope of the book, is truly amazing. This is achieved by concentrating solely upon the subject at hand rather than digressing into clinical fields, which not uncommonly occurs in texts on roentgen diagnosis.

The authors are to be especially commended on their liberal use of line drawings and sketches throughout the text to complement the written description of roentgen changes as well as to clarify the roentgenograms. For the beginner, particularly, this is an extremely valuable training aid. By reading the text and studying the corresponding drawings the criteria for a given disease become more meaningful and are more easily remembered.

The bibliography has been limited to specific articles, which in themselves give considerable information and represent a key to the literature on the subject. This text is recommended for all who have an interest in diagnostic roentgenology. The student, resident, or practicing physician will all find it an extremely valuable addition to his library. The practicing radiologist will find the text of value for review and quick reference.

GEORGE TIEVSKY, M.D.

**Morals in Medicine.** THOMAS J. O'DONNELL, S.J., Regent and Professor of Medical Ethics, Georgetown University School of Medicine. Price, $3.75. Pp. 281. Westminister: Newman Press, 1956.

For several years our profession has been seeking a book on medical ethics which is at once current and stimulating. Such a book is "Morals in Medicine." In fact, it is so well done that, while it is not in the least hypnotic, it could conceivably become habit-forming. It certainly belongs in the library of every practicing physician.

The author, by reason of his position and background, is eminently qualified to instruct us in this complicated field. The first 2 chapters of Father O'Donnell's work are concerned with the basic concepts of philosophy upon which the body of the book is built. It follows that the average reader, not versed in the disciplines of Catholic Ethics, Moral Theology, and Canon Law, will find these pages worthy of and requiring careful study. Thereafter the readability of the book is excellent. Direct quotations from both medical and theologic authorities, as well as practical examples of moral problems in medicine, are used to advantage. The author has utilized his access to expert medical opinion so well that there is little room to quarrel with this aspect of this treatise. In this regard my impression was: "This man talks like a doctor."

As would be expected, the moral aspects of pregnancy, delivery and surgery are afforded the most generous coverage. However, all issues are touched upon, even to recent medical vogues, such as hypnosis and lobotomy. We all should understand that no book in this field, no matter how exhaustive, can cover every moral problem which the physician is liable to face in his practice. A thorough understanding of the principles which Father O'Donnell outlines for us will afford a solid foundation for discussion with theologians, doctors or patients.

WILLIAM F. COLLITON, JR.

**Educating Spastic Children. The Education and Guidance of the Cerebral Palsied.** F. ELEANOR SCHONELL, M.A., PH.D., Formerly Research Fellow, University of Birmingham, Department of Paediatrics and Child Health. Price, $6.00. Pp. 242, illustrated. New York: Philos. Libr., 1956.

There is a dearth of literature on the education of the child with cerebral palsy. Unfortunately, the author retains the term "spastic" instead of the current generic classification "cerebral palsy." There is also another major error when she states of Phelps, in his methods, that "stress is laid very largely on the physical aspect." This is contrary to the opinion of those intimately associated with his work.

On the whole, a wealth of material is contained within 217 pages, divided in a well balanced manner and written in a very easy style. Partly narrative, with statistical tables which show the results of her studies, and partly descriptive of the methods used in educating these children, all of which are based on psychologic concepts, the work is comprehensive.

While we do not agree in all instances with her conclusions, they are the rational result of her findings. The work is informative and thought-provoking. It should provide definite help to therapists, teachers, social workers, psychologists, and physicians who are engaged in the study and care of these children. Because of the inclusion of matter which could be considered controversial, it seems that this book is for professionals and not for parents.

WILLIAM P. ARGY, M.D.

**Clinical Pathology—Application and Interpretation,** 2nd edition. BENJAMIN B. WELLS, M.D., PH.D., Director of Clinical Investigation, The Lynn Clinic, Detroit; Former Professor of Medicine, Creighton University School of Medicine, Omaha. Price, $8.50. Pp. 488, with 25 illustrations. Philadelphia: Saunders, 1956.

In the second edition of Clinical Pathology much new and valuable material is included. It is so well arranged that one may quickly find, under the disease, a description of the laboratory procedures of greatest usefulness. The explanation of the laboratory findings and their interpretation are very helpful.

Infectious diseases are well covered from several angles, including hematologic response, serum reactions, skin sensitivity tests, C-reactive protein, and others. Viral and rickettsial diseases are discussed and the diagnostic problems caused by fungi and parasites are considered. Abnormal hemoglobins (A, F, S and C) are among the newer subjects in the excellent chapter on hematology. A valuable presentation of the laboratory findings in the differential diagnosis of jaundice is found in the chapter on gastrointestinal diseases.

Protein-bound iodine and radioiodine give a new approach to the diagnosis of thyroid disorders. The determination of the 17-ketosteroids has been found of value in the diagnosis of Addison's disease.

Laboratory studies in surgery, in respiratory, and in cardiorenal conditions are well covered. Procedures, both new and old, of questionable value are analyzed to show the reasons for their lack of merit. This practical feature is most helpful to the practitioner in enabling him to make the most intelligent use of the laboratory.

H. H. LEFFLER, M.D.

**Ciba Foundation Symposium, jointly with The Physiological Society and The British Pharmacological Society on Histamine** in honour of Sir Henry Dale, O.M., G.B.E., M.D., F.R.C.P., F.R.S. G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.CH., AND CECELIA M. O'CONNOR, B.Sc., Editors for the Ciba Foundation. Price, $9.00. Pp. 472, with 133 illustrations. Boston: Little, 1956.

This volume is the proceedings of 2 concurrent international symposia held in 1955 to honor Sir Henry Dale. It is authoritative and contains an extraordinary wealth of material and speculation. But typical of the many symposia which have become a necessary part of the rapid advance of medical research, much of the material of 39 contributors is dispersed. For the experimental pharmacologist, pathologist or others willing to read the book in its entirety, the effort will be well rewarded. Those seeking a responsive answer to a restricted question may be discouraged.

Reflecting the research interest of 1955, the pharmacology of histamine release is emphasized. Many drugs release histamine and some aspects of drug idiosyncracy may not involve an antigen-antibody reaction. A corollary to release is histamine storage within mast cell mitochondria by virtue of the intracellular membrane.

While it is reported that the allergic reaction of bronchial asthma may involve release of an unidentified substance which is perhaps more important than histamine, the role of histamine in allergy is only considered indirectly. The various enzymatic steps in the formation and destruction are carefully considered but much remains to be known about the over-all picture in the intact animal.

While the possible physiologic roles of histamine are reviewed, it must be admitted, even in the case of gastric secretion, we do not yet know if histamine has any physiologic role.

C. ADRIAN M. HOGBEN, M.D.

## FRANCIS deSALES MACHEN, M.D.

### (1873–1956)

### An Appreciation

Dr. Machen died on Christmas Day after passing his eighty-third year. Until the beginning of his last illness he was still attending his practice, and he looked and acted like a vigorous man in his early 60's. He was a Life member of the Medical Society of the District of Columbia.

Since his graduation from Georgetown in 1902, he had lived through the most interesting and prolific era in the history of medicine and, by constant study and observation, he was always abreast of the times. We had many long discussions about Erlich's work on syphilis, Banting's work on insulin, Fleming's great discovery of penicillin, Salk's triumph with poliomyelitis, etc. As the new antibiotics appeared, almost weekly, he became familiar with their names and usages. He was an outstanding example of what a family physician should be. He was quick to respond to the calls of his patients in distress, and his presence in the sick room brought relief of pain and apprehension, and also cheerfulness and confidence to his patients.

His intelligence, knowledge and experience were valuable to the Massachusetts Mutual Life Insurance Company, whose Chief Medical Examiner he was for more than 25 years.

He is survived by a devoted wife and three who called him "Father," Doctor John, a successful pediatrician in Baltimore, and two happily married daughters, Mrs. Donald A. Rice, of Silver Spring, Maryland, and Mrs. John J. McWilliams, of Texas.

The medical profession has lost a real doctor.

James A. Gannon, M.D.

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Dr. Francis de Sales Machen died December 25, 1956, at the Washington Sanitarium, after an illness of several months. An able diagnostician, Dr. Machen had maintained his general practice in Washington from 1902 until he retired in 1946. His offices for many years were in his home at 3206 17th Street, N.W. In recent years, he lived at 4731 30th Street, N.W.

Dr. Machen was the son of William Henry Machen, architect, artist and musician, and Mary A. Short Machen. Born in Toledo, Ohio, December 18, 1873, he attended Detroit schools and Detroit College. He came to Washington in 1894 and secured employment at the Post Office Department; with income thus obtained he was enabled to attend Georgetown University School of Medicine. He graduated from Georgetown in 1901 and interned at Georgetown Hospital the following year. From 1901 to 1904, he taught at Georgetown as demonstrator of obstetrics.

Dr. Machen was Chief Medical Examiner for the Massachusetts Mutual Life Insurance Company for more than 25 years. During the first World War, he served on the Draft Board.

He became a member of both the Medical Association and the Medical Society of the District of Columbia in 1903 and a Life member of the latter in 1944. He also was a member of the American Medical Association. His fraternal organization was the Knights of Columbus.

Surviving him are his wife, Mrs. Catherine M. Etter Machen; a son, Dr. John W. Machen, of Baltimore; and two daughters, Mrs. Donald A. Rice, Silver Spring, Maryland, and Mrs. John J. McWilliams, of Houston, Texas. There are also a brother, Mr. Charles A. Machen, of Washington, and a sister, Mrs. Albert J. Phillips, of El Monte, Calif.

## ROBERT ARTHUR HOOE, M.D.

### (1880–1956)

Dr. R. Arthur Hooe, practicing urologist for 50 years and a Life member of the D. C. Medical Society, died December 20, 1956, in Emergency Hospital, after an illness of several months. He lived at 1421 Massachusetts Avenue, N.W.

The son of Isaac and Lucy Barnes Hooe, Dr. Hooe was born in King George County, Virginia, July 21, 1880. He attended Fredericksburg College and graduated in medicine from George Washington University in 1906. He interned at George Washington University Hospital and received his training in genitourinary surgery under Dr. H. A. Fowler, with whom he later became associated.

During his many years of practice, Dr. Hooe was on the hospital staffs of Emergency, Freedmen's, and Gallinger (now D. C.) Hospitals.

Dr. Hooe was elected to membership in the Medical Society of the District of Columbia in 1910 and became a Life member in 1951. He had served on many of the Society's committees and boards, including the old Executive Committee, the Board of Censors, and the Committee on Industrial Medicine.

He was a member of the American Urological Association and the American Medical Association; at one time he was Vice Chairman of the AMA's Section on Urology. He was a Past President of the Washington Surgical Society and a member of the Virginia Medical Society, the Middle Atlantic Urological Society, and the Washington Urological Society. He was a member of the Chevy Chase Club.

Dr. Hooe was never married. He is survived by his sister, Miss Medora B. Hooe, who lived with him at the Massachusetts Avenue address.

## LEOPOLD E. WEXBERG, M.D.

### (1889–1957)

Dr. Leopold E. Wexberg, internationally known psychiatrist and head of the District's Mental Health Bureau, died suddenly, January 10, 1957.

Dr. Wexberg, the son of Leon and Anna Wexberg, was born in Vienna, Austria, February 12, 1889. His early education was received in Vienna and his medical degree from the University of Vienna in 1913. He stayed on in Vienna for his internship and for seven years' postgraduate study in the fields of neurology and psychiatry; he also spent one year each in Berlin and Paris in further study in these fields.

Dr. Wexberg practiced in Vienna until 1934. He came to the United States in 1935 and secured another degree in medicine from the Louisiana State University in 1936. He was Visiting Professor of Neurology and Psychiatry at this institution from 1935 to 1942, and Professor of Social Psychiatry at Xavier University, New Orleans, 1935 to 1940. In 1942 he enlisted in the Medical Corps of the United States Army, serving for three years. During World War II, he headed the neuropsychiatric section of Army hospitals in the Canal Zone; Camp Adair, Oregon; and Camp Beale, California. He was promoted in rank from Major to Lieutenant Colonel.

Dr. Wexberg came to the D. C. Department of Public Health in 1945 as Director of the Bureau of Mental Hygiene and was instrumental in establishing the Alcoholic Clinic, which preceded the present Alcoholic Rehabilitation Clinic. This clinic for alcoholics was the first such service in the country to operate as part of a municipal Health Department. He relinquished the directorship of the Alcoholic Clinic in 1953.

Dr. Wexberg was a diplomate of the American Board of Neurology and Psychiatry. He was elected to Active membership in the Medical Society of the District of Columbia in 1946. He also belonged to the American Medical Association, the American Psychiatric Association, the American Academy of Neurology, the Washington Psychiatric Association, and the Washington Association for the Advancement of Psychotherapy. He was a member of the American Ethical Culture Society.

He was a prolific writer; his bibliography includes five books on psychology and some hundred papers, monographs and articles.

His wife, Mrs. Frieda Wexberg, died in 1955. He is survived by three daughters, Miss Ruth Wexberg, who lived with him at 2440 Sixteenth Street, N.W.; Mrs. Alba Bachrich, of New York City; and Mrs. Irving Schlaffer, Berkeley, Calif.; also two sisters, Mrs. Elsa Tarschys, of Washington, and Mrs. Frieda Brauner, of New York City.

### Lymphedema of Arm after Irradiation—Haberlin and Copeland

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### Medicare

(*Continued from page 98*)

Section V. *Certification(s) of Physician, Dentist, Hospital or Private Duty Nurse.*

Item 29.—The physician is required to sign the Statement of Services in this space, certifying that his services to the dependent were provided in accordance with the law and that payment for the services provided under the law will be accepted as payment in full.

Item 30.—Wives and children of members of the uniformed services are entitled to consultants' services, and specified allowances toward the cost of private hospital accommodations and private-duty nursing care if the attending physician certifies to the need of such services and/or facilities. In order that the patient may obtain benefits for these services it is necessary that the attending physician certify as to their need in this space on the form being submitted by the consultant, hospital or private-duty nurse.

3. Payment of Claim (by Medical Service of D. C.)

Two copies of the Statement of Services provided by civilian medical sources must be prepared and submitted to Medical Service of D. C. for payment. The physician may, of course, retain a third copy for his own records if he wishes.

Upon receipt of the Statement of Services rendered, Medical Service of D. C. will process the statement for payment to the physician. Processing of the claim will be expedited if the Statement of Services rendered is in order, and the physician does not claim an amount in excess of that authorized under the Schedule of Allowances.

MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI *March*, 1957 NUMBER 3

# SOLITARY NONPARASITIC CYSTS OF THE LIVER*

## Report of Three Cases

CHARLES S. WHITE, M.D., F.A.C.S.
CHARLES S. WHITE, JR., M.D.
WILLIAM E. BEAVEN, M.D.
*Washington*

ALTHOUGH approximately 200 cases of solitary nonparasitic cysts of the liver have been reported to date, their rarity is emphasized by the fact that it has taken 100 years to accumulate these in the world's literature. More significant is the fact that recent reviews of the subject have failed to uncover a proportionately larger number of cases in the past 50 years than were reported during the first 50-year period following Michel's original description[1] in 1856. In 1906 Moschcowitz[2] was able to collect 85 of these cases; by 1929 Stoesser and Wangensteen[3] could find only 19 more.

At the Montreal General Hospital Ackman and Rhea[4] found that the incidence of solitary liver cysts in 6,141 consecutive autopsies was 0.1 per cent. In 20,000 autopsies performed at the Philadelphia General Hospital Eliason and Smith[5] found this incidence to be only 0.3 per cent higher. They also discovered, out of 211,046 admissions to the same institution, only 2 patients with the clinical diagnosis of solitary nonparasitic cyst of the liver.

Because of this rarity we believe that additional case reports are warranted. The clinical abstracts of 3 patients taken from the records of 100,000 admissions to Doctors Hospital over a 10-year period are hereby presented.

### Report of Cases

**Case 1.** O. C., a 33-year-old multipara, in her seventh month of pregnancy, was admitted to the Obstetrical Service at Doctors Hospital on March 12, 1946. During the previous month she had noted a more than expected increase in the size of her abdomen, as well as an unusual degree of postprandial epigastric fullness, anorexia and nausea. She also stated that since the birth of her first child 2 years before she had rarely felt "well," mostly because of easy fatigability and exertional shortness of breath. On the day of admission she complained of pain in the right shoulder, relieved by assuming an upright position.

Physical examination revealed an acutely ill-appearing white woman in some distress from pain in the upper abdomen. The mucous membranes were pale, and there was a definite icteric tint to the sclerae. Palpation of the abdomen revealed the dome of the uterine fundus at the level of the umbilicus. Above this, throughout the entire right upper portion of the abdomen, a diffusely tender, globular mass could be felt. It extended 5 fingerbreadths below the right costal margin and somewhat to the left of the midline. Except for diminished breath sounds over the base of the right posterior thorax the rest of the examination was negative.

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* From the Department of Surgery, Doctors Hospital, Washington, D. C.

A roentgenogram of the abdomen revealed a single fetus with the head presenting its occiput to the mother's left. The soft tissue shadow of the uterus appeared to be displaced downward, apparently due to a mass which was interpreted to be an enlarged liver. Fluoroscopy revealed a marked elevation of the right diaphragm, with a respiratory excursion of about half that of the left. There was some apparent compression of the parenchyma of the lower portion of the right lung. An intravenous pyelogram revealed a marked downward displacement of the right kidney.

On admission the erythrocyte count was 3,600,000, the hemoglobin, 8.8 Gm., and the leukocyte count 12,300, with a predominance of neutrophils. The urinalysis was normal. Liver function studies were as follows: icterus index 50, Vandenberg (indirect) 5.1 mg. per cent, cephalin flocculation negative, total serum proteins 6.1 Gm. per cent, A/G ratio 3.6/2.0, and total serum cholesterol 181 mg. per cent. A guaiac test for occult blood in the stool was negative.

On March 16, 1946 there was an abrupt cessation of fetal movements and audible fetal heart sounds. The membranes were immediately ruptured artificially and a stillborn fetus delivered. Over the following 2 weeks the patient's general condition deteriorated markedly with increasing fever and deepening jaundice. A repeat roentgenogram of the abdomen showed that the lesion in the right upper quadrant had doubled in size.

On April 2, 1946 it was the opinion of a surgical consultant that an abdominal exploration could no longer be postponed. On opening the peritoneal cavity an enormously enlarged liver was found occupying the entire right side of the abdomen down to the pelvic brim. The greater part of the right lobe seemed fluctuant to palpation. A trocar was inserted and 6,300 c.c. of clear, straw-colored fluid aspirated. Through a small stab wound a rubber tube drain was inserted into the cyst cavity and sutured to its wall. Postoperatively the patient made an excellent recovery and was discharged on April 15, 1946. By the sixth postoperative week all external drainage from the cyst cavity had ceased, and the tube drain was removed. By the ninth week the remaining sinus was obliterated and the wound entirely healed. Periodic examinations over the past 10 years have shown no evidence of recurrence of the cyst.

Examination of the fluid contents of the cyst revealed the following information:

Specific gravity: 1.008
Cell count
  White blood cells: 100/c.c.
  Red blood cells: 5,000/c.c.
Culture (routine): No growth
Smear: No organisms seen
Bilirubin (Gmelin's test): Negative
Urobilinogen (Schlesinger): Positive

The surgical specimen consisted of a small piece of red-brown tissue. Microscopic examination revealed this to be the wall of the cyst. The inner surface was lined by a markedly compressed cuboidal epithelium with, however, an intact basement membrane. The underlying stroma consisted of dense fibrous tissue blending into altered liver parenchyma. The latter showed atrophy and degenerative changes within the lobules. There was some proliferation of the intralobular connective tissue as well as periportal round-cell infiltration.

**Case 2.*** R. L., a 29-year-old white, married woman, was admitted to Doctors Hospital on October 16, 1955 with the chief complaint of abdominal swelling. She had first become aware of this following a normal delivery 3 years previously. Over this interval there had been an unexplained weight gain of 50 lbs. Several months prior to admission she had noted intermittent pains in the right upper portion of the abdomen. These were usually associated with dyspepsia but without nausea or vomiting. There was no evidence of jaundice, edema, melena, bowel movement or menstrual irregularities.

Physical examination revealed a well-nourished but not obese patient in no discomfort. The vital signs were all within normal limits. The weight was 175 lbs. Significant findings were limited to the abdomen, which revealed an asymmetry caused by a marked protuberance of the entire right half of the anterior abdominal wall. Palpation of this revealed a large, diffuse, somewhat movable mass which extended from the right subcostal margin to the brim of the right pelvis and from the right flank to the umbilicus. The urinalysis as well as both leukocyte and erythrocyte counts were within normal limits.

At operation a huge liver cyst was discovered arising from the undersurface of the right lobe of the liver just lateral to the gallbladder. The cyst measured 22 cm. in diameter and following aspiration through a suction trocar was found to contain approximately 2 gallons of fluid. Its base was found to be only superficially imbedded in the hepatic parenchyma above the point of origin. For this reason total excision of the cyst was elected as the procedure of choice. This was accomplished by a circular incision around the base of the cyst where the liver thinned out over the cyst wall. By blunt and sharp dissection the cyst was shelled out from the underlying liver bed. Bleeding was controlled with Gelfoam packing and the liver edges sutured together around a small tissue drain. Postoperatively the patient made an entirely uneventful recovery, and she was discharged from the hospital on the tenth postoperative day.

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* Through courtesy of Dr. Harry L. Claud, Washington, D. C.

The specimen consisted of a large, empty cyst. The wall was irregularly thickened. The internal surface was smooth except for a few loculated areas. Microscopic examination of sections of the cyst wall revealed areas of dense fibrous tissue lined on one side by a single layer of low columnar epithelium of the bile-duct type. In some segments evidence of old hemorrhage was manifested by the presence of histiocytes filled with blood pigment and the loss of overlying epithelium.

**Case 3.** L. F., a 72-year-old white woman, was admitted to Doctors Hospital on June 5, 1956 because of increasing fatigability and a feeling of fullness in the abdomen for 3 months. One month prior to admission, she had observed a tender, globular mass in the right upper portion of her abdomen. Except for some anorexia, associated with a 5- to 10-pound weight loss, the rest of the system review was noncontributory. In 1934 a hysterectomy had been performed for uterine fibroids.

On examination she appeared to be well nourished but chronically ill. The temperature was 100.2°F. Other vital signs were within normal limits. Positive physical findings were limited to the abdomen. In the right upper quadrant there was a hard, tender, globular mass whose inferior border extended from the right flank to just across the midline in the epigastrium 4 to 5 cm. below the right costal margin. It could not be determined clinically whether this tumor mass was separate from the liver.

Roentgenograms of the stomach following a barium meal were interpreted as showing a space-occupying lesion in the region of the liver, displacing the stomach somewhat laterally and anteriorly (figure 1). Roentgenograms of the abdomen following a barium enema revealed a slight downward displacement of the left portion of the transverse colon. The clinical impression was that the lesion represented either a retroperitoneal tumor or a carcinoma of the liver.

On June 8, 1956 the patient underwent an exploratory laparotomy. A large cystic mass was encountered in the midepigastrium. Mobilization of the cyst clearly demonstrated its origin from the left lobe of the liver, most of which was replaced by the cyst itself. Careful dissection of the inferior margin of the cyst revealed no connection or communication with the pancreas. Further exploration of the peritoneal cavity revealed a large gallstone in the fundus of the gallbladder and a large cystic mass within the substance of the right ovary. A right oöphorectomy was performed followed by extraction of the gallstone and subsequent cholecystostomy. Because of the size of the liver cyst as well as the patient's generally poor condition a marsupialization procedure was elected following aspiration of the contents of the cyst cavity. A T tube was inserted into the cyst sinus to facilitate subsequent drainage. Postoperatively the patient made an extremely satisfactory convalescence and was discharged from the hospital on June 27, 1956 (19 days following operation). Subsequent examinations have revealed the gradual obliteration of the cavity. By the sixth postoperative week there was complete cessation of all drainage. At that time the T tube was removed, and by the eighth postoperative week the wound had healed completely.

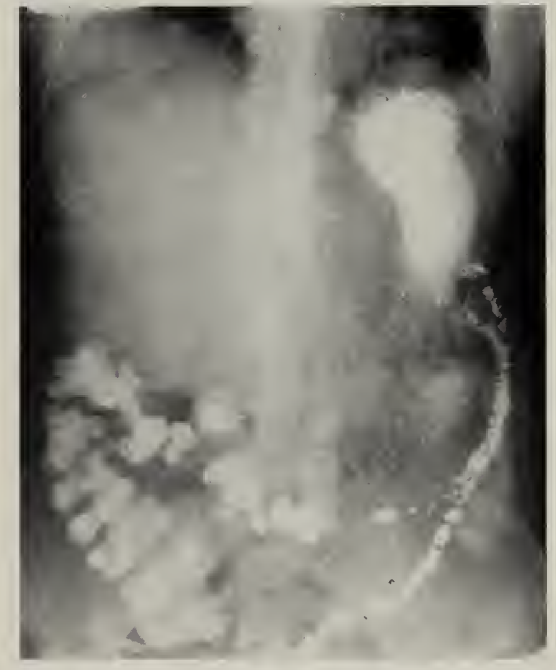

FIG. 1. Case 3. Barium-filled stomach showing pressure defect produced upon lower portion of lesser curvature by soft tissue mass confluent with the liver shadow.

One surgical specimen consisted of a relatively thin but dense portion of the wall from the liver cyst. Included with this was a red-brown segment of tissue resembling liver. The other specimen was a cystic tumor involving the ovary. The cut surface of this revealed aggregates of cystic spaces filled with serous fluid. Histologic examination revealed the cyst wall to be lined with a single layer of epithelial cells (figures 2 and 3). The underlying tissue consisted of dense fibrous tissue showing increased vascularity and round-cell infiltration. The segment of liver tissue showed marked distortion of the liver cells, particularly those adjacent to the portal triad. Sections of the ovarian tumor were interpreted to be a papillary cystadenofibroma.

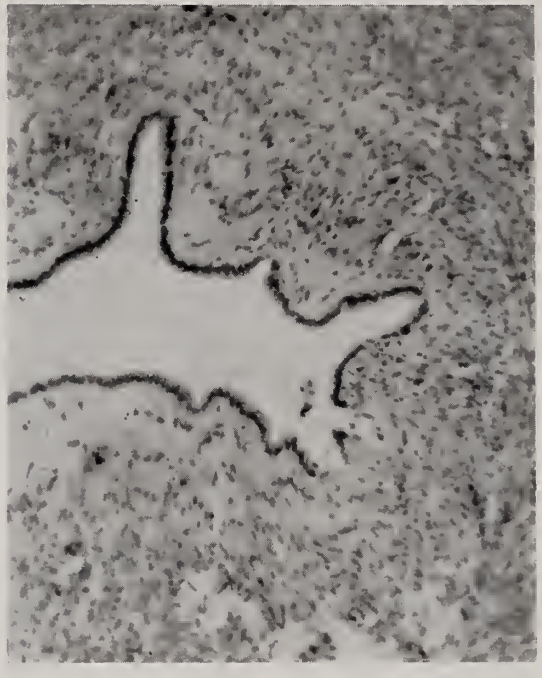

FIG. 2. Case 3. Segment of liver cyst wall showing dense inner layer of fibrous tissue lined by columnar epithelium.

## CLASSIFICATION

Nonparasitic cysts of the liver may be single or multiple. Davis[6] justifies their separation into distinct entities because of certain clinical differences. Solitary cysts usually occur in a much older group of patients. Multiple cysts are frequently associated with cysts of other organs (polycystic disease) as well as congenital malformations such as harelip, spina bifida, etc.

A universally accepted classification of solitary cysts is yet to be presented. The multiplicity of tissues from which they may arise within the liver makes it apparent that there is no one "true" type of liver cyst. Because of this, most classifications are based on histogenesis. In 1923 Jones[7] collected the opinions of several authors and decided that solitary cysts are best grouped as follows: (1) teratomatous cysts, (2) pseudocysts, (3) lymphatic cysts, (4) cystic degeneration (associated with cystic kidneys), (5) angiomatous cysts, (6) cystadenomas, (7) ciliated epithelial cysts, and (8) retention cysts. Later Clagett[8] formulated a more comprehensive listing based on pathogenesis, i.e., inflammatory, degenerative, tumor and developmental. Probably the most generally accepted classification in the literature is that of Sonntag[9]: (a) blood and degenerated cysts, (b) dermoids, (c) lymphatic, (d) endothelial, (e) retention (bile cysts), and (f) proliferative (cystadenoma).

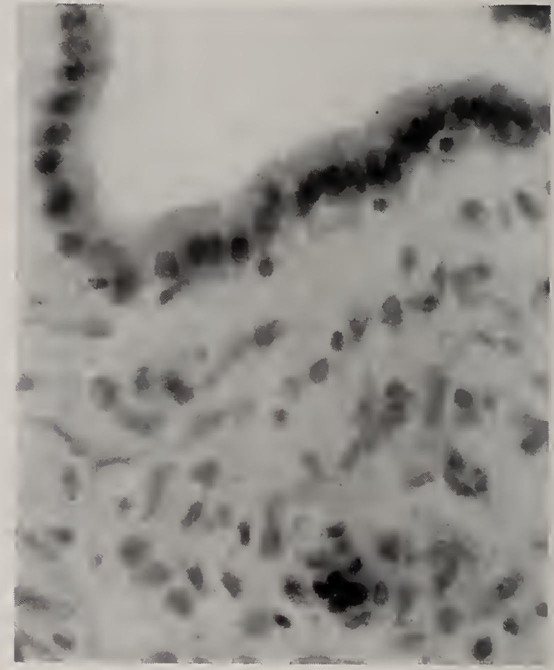

FIG. 3. Case 3. Higher magnification of lining epithelium.

As might be imagined, considerable confusion has stemmed from this array of terminology. At present an attempt is being made to limit the definition of solitary liver cysts to those of congenital origin only. Geist,[10] in his scholarly review of the literature up to 1955, defined a congenital cyst according to the criteria of Schaack.[11] He then included only those cases in which the gross and microscopic appearance of the cyst fulfilled this description. All cases of cysts resulting from trauma, cystic formation of benign and malignant tumors, lymphatic cysts, dermoids and hemangiomata were excluded. He believed that only in this manner could an accurate estimation of the numbers of nonparasitic solitary cysts of the liver be determined.

## Etiology

This is still speculative. There is little embryologic evidence to separate solitary from multiple liver cysts. Stoesser and Wangensteen[3] found many cases reported as solitary cysts actually being cases of multiple cysts in which one cyst predominated. They agreed with Boyd[12] that both types were but different manifestations of the same developmental defect and probably related to polycystic disease in general.

Carling[13] and Hart postulated that these lesions are formed from inclusions of isolated portions of the wolffian body in the enteric buds forming the liver and pancreas. Norris and Tyson[14] concluded from investigations in infants that these cysts are degenerative and arise from some abnormal extension of the process of resorption which normally occurs in the first generations of developing bile ducts. Probably the most acceptable hypothesis, however, is that of Moschcowitz.[2] He was of the opinion that nonparasitic cysts of the liver were associated with congenital anomalies arising in aberrant extrahepatic and intrahepatic bile ducts. He believed that these represented embryonal rests and that faulty fusion of these ductal elements resulted in cyst formation.

Other theories as to their mode of origin have been discussed at length by Burns,[15] Jones,[7] McGlannan,[16] and Henke.[17]

## Pathologic Considerations

Solitary cysts of the liver vary greatly in size, ranging from a few centimeters in diameter to the one reported by Ochsner,[18] which contained 3½ gallons of fluid. The average volume, calculated from available information in Geist's review,[10] was 2,000 c.c. Interestingly, this figure is relatively constant despite the location of the cyst within the liver or the sex of the patient (table 1).

TABLE 1

*Average Age of Patient and Volume of Cyst According to Patient's Sex and Location of Cyst within the Liver*

(Calculated from available information in 100 cases reviewed by Geist.[10])

| | No. of Patients and Sex | | Average Age of Patients | | Average Volume of Cyst (c.c.) | |
|---|---|---|---|---|---|---|
| | *Right Lobe* | *Left Lobe* | *Right Lobe* | *Left Lobe* | *Right Lobe* | *Left Lobe* |
| Male | 17 | 24 | 33 | 44 | 2,370 | 1,608 |
| Female | 49 | 10 | 46 | 35 | 1,916 | 1,840 |
| Total | 66 | 34 | | | | |

Solitary cysts are most commonly found at the antero-inferior portion of the right lobe of the liver. However, they frequently stem from the quadrate or left lobe, within the gallbladder fossa, or along the free border. They may be entirely intrahepatic or almost wholly extrahepatic and pedunculated.

The external surface of these cysts is usually smooth and glistening, greyish-blue, and often containing many dilated veins. The internal surface is smooth but less regular, usually trabeculated, and often contains many loculations. The thickness of the wall varies but is frequently described as "dense." The fluid contents of the cavity depend on the cyst's histogenesis, age, and communication with the biliary tract. Analysis of the fluid may show albumin, mucin, blood, cholesterol, and cellular debris, but only rarely bile or urobilinogen. In contradistinction to Echinococcus cysts, nonparasitic solitary cysts have a low internal tension.

According to Schaack,[11] the microscopic appearance of a solitary cyst should conform to the following description. The wall is made up of 3 layers of connective tissues: an inner layer, rich in cellular elements; a circularly arranged dense layer, poor in cell nuclei; and a loose outer layer with elastic fibers, muscle bundles, blood vessels and bile ducts. The lining epithelium may be absent but is usually cuboidal and resembles that lining the biliary tract elsewhere.

## Clinical Features

Solitary cysts affect women approximately 4 times as frequently as men. They are most commonly observed in the fourth and fifth decade but have been discovered at all ages of life, not infrequently associated with pregnancy. Their growth is apparently so slow that few if any symptoms develop during their early development. A painless abdominal swelling with minimal digestive disturbances is usually the initial complaint. Rarely, the onset of symptoms may be abrupt due to hemorrhage, suppuration, leakage of contents into the peritoneal cavity, or the twisting of a pedicle in the pedunculated variety. Otherwise, symptoms depend on disturbances from pressure against extrahepatic bile ducts, the duodenum, colon or other neighboring organs.

A correct preoperative diagnosis is rarely made. Kilvington of Australia is accredited with the first such instance when he made the diagnosis on the basis of a low internal tension of an intra-abdominal cyst.[19] Hoffman[20] described what he believed to be an important diagnostic criterion of a large liver cyst. In contradistinction to neoplasms and other enlargements, liver cysts tended to push the colon down and to the left, a point easily seen by barium enema. Munroe[19] reported an observation in physical diagnosis; in all cases of large pedunculated liver cysts downward displacement is limited by anchorage to the liver, but a considerable degree of lateral movement can often be obtained.

Other diagnostic aids are of little help. Laboratory studies, including liver function tests and blood counts, are usually uninformative. Peritoneoscopy and artificial pneumoperitoneum have been used, but the results have been disappointing. Diagnostic aspiration of the cyst has not been reported but may be well worthwhile.

## Treatment

The only satisfactory mode of therapy is surgical intervention. The many technics described are but variations of 2 basic principles, drainage and excision. External drainage is best established by marsupialization. Internal drainage may be accomplished by cystogastrostomy or cystojejunostomy. Excision of the cyst may require only a simple enucleation or a more extensive, partial hepatectomy. Excellent results have been reported for all of these methods. However, the procedure of choice should depend on the size of the cyst, its degree of envelopment by the liver parenchyma, the thickness of the wall, and the general operative risk to the patient.

As with all operations, there are certain hazards and complications. Fatalities have been reported which were due to shock from sudden release of intra-abdominal pressure. In some instances, following external drainage, the sinus tract has failed to close. This has been attributed to loculations within the cyst wall that were inadequately drained at the time of surgery. Occasionally it has been observed that extremely thick-walled cysts fail to collapse on aspiration of their contents.

Operative mortality has shown a persistent decline over the years. In 1932 Beattie and Robertson[21] reported 13 deaths (20.0 per cent) out of 62 previously reported cases. In 1955 Geist[10] could find only 3 deaths (2.4 per cent) out of 122 patients who underwent surgery after 1924.

## Comment

The complex functions of the liver open a wide field for speculation in diagnosis, and unusual conditions found in this organ do not simplify the problem. Cysts of the liver are so infrequent that their presence is rarely suspected.

*(Continued on page 159)*

# THE SURGICAL TREATMENT OF EMPHYSEMATOUS BLEBS*

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IN A DISCUSSION of the surgical treatment of emphysematous blebs it is convenient to divide cases into 3 categories: (1) those with subpleural or peripheral blebs with no evidence of associated emphysema, (2) those with blebs associated with localized emphysema, and (3) those with generalized emphysema complicated by blebs (tables 1 and 2). Whether these are separate entities or represent the progression of the same disease is a controversial subject. Moreover, the exact etiology of the formation of pulmonary blebs remains a mystery.

TABLE 1
*Ages of Patients and Types of Lesions in Spontaneous Pneumothorax*

| Age | Subpleural Blebs | Localized Emphysema Bullae | Generalized Emphysema Bullae |
|---|---|---|---|
| 10–20 | 5 | — | — |
| 21–30 | 20 | 3 | 1 |
| 31–40 | 8 | 8 | 6 |
| 41–50 | 5 | 3 | 9 |
| 51–60 | 4 | — | 5 |
| 61–70 | — | 1 | 2 |
| 71–80 | — | 1 | 1 |
| TOTAL | 42 | 16 | 24 |
| TOTAL CASES |  |  | 82 |

## SUBPLEURAL BLEBS

Subpleural blebs are frequently demonstrated at postmortem examination and during intrathoracic operations for other diseases. It appears, therefore, that the great majority of subpleural blebs cause no symptoms. The most common complication of subpleural blebs is rupture of the lesion with the production of a progressive tension pneumothorax. If a ball valve mechanism develops in the bronchial communication to a bleb, allowing air to enter but not escape, the intact bleb may inflate to such proportions as to embarrass respiration. This complication is more common in lesions associated with demonstrable emphysema and in older patients.

TABLE 2
*Types of Lesions Causing Spontaneous Pneumothorax*

|  | Single | Multiple | Bilateral | Total No. |
|---|---|---|---|---|
| Subpleural Blebs | 31 | 6 | 5 | 42 |
| Localized Emphysema Bullae | 5 | 2 | — | 7 |
| Generalized Emphysema Bullae | 6 | 4 | 1 | 11 |
| Total |  |  |  | 60 |

The ages of the patients and the types of lesions in 82 cases of pulmonary blebs are outlined in table 1.

## SUBPLEURAL BLEBS WITHOUT DEMONSTRABLE ASSOCIATED EMPHYSEMA

Spontaneous pneumothorax from the rupture of subpleural blebs without associated emphysema is common in young and otherwise healthy patients. There is rarely a history of associated exertion, and often the first indication of the air leak is chest pain. If the pneumothorax is not progressive, several hours or even days may elapse before the patient seeks medical attention. Sufficient tension to produce shortness of breath will, however, require immediate emergency treatment.

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* Presented at the Golden Anniversary Meeting of the Southern Medical Association in Washington, D. C., November 12, 1956.

Not infrequently a careful review of the history will establish similar episodes of chest pain which have disappeared within a few hours and were therefore ignored.

The distribution of subpleural blebs causing pneumothorax in 42 cases is shown in table 3.

TABLE 3
*Types of Treatment of Pneumothorax from Subpleural Blebs*

| | |
|---|---|
| Conservative | 13 |
| Aspiration (needle-tube) | 12 |
| Local excision | 2 |
| Local excision poudrage (bilateral) | 12 (3) |
| Poudrage alone | 2 |
| Decortication-excision poudrage | 1 |
| Deaths | 0 |
| Total | 42 |

The 13 cases included under the heading "conservative" are examples of patients with small pneumothorax pockets which were not progressive. The air absorbed rapidly, and no other treatment was necessary. In 12 cases the pneumothorax was rapidly progressive, and aspiration of air was necessary as an emergency life-saving procedure.

If the patient has had 2 or more attacks of pneumothorax, definitive surgical treatment is recommended. If decompression with an intercostal catheter and water-sealed drain fails to effect expansion of the lung, an open operation should be performed. Patients with evidence of attacks of bilateral pneumothorax are candidates for surgery.

The purpose of an open operation is to excise or obliterate the blebs, effect and maintain expansion of the lung, and create a sterile pleuritis to hold the lung in an expanded position. The exact technics depend upon the nature and extent of the lesions.

Occasionally a greater part of the lung surface is covered with small blebs. Excision of each lesion would result in dangerous damage to the lung surface. In these cases the production of pleural adhesions with sterile talc poudrage is indicated.

The following case report provides a description of the problem of recurrent pneumothorax resulting from subpleural blebs.

**Case 1.** A 32-year-old white man was admitted to the George Washington University Hospital on June 16, 1956 with the chief complaint of anterior chest pain on the right and shortness of breath of 4 hours' duration. The onset of pain was sudden and severe. He soon developed shortness of breath. Pain and dyspnea continued until admission.

The patient had had similar episodes on 2 previous occasions. Four years before he had been admitted to this hospital complaining of anterior chest pain on the left, dyspnea and cyanosis. A tension pneumothorax was diagnosed. A thoracostomy with insertion of a tube for water-seal draining was performed. Recovery was rapid and uneventful. Seven months before he had been admitted again with sudden pain on the right and dyspnea. A tension pneumothorax was diagnosed. This was likewise treated by water-seal drainage. Except for these the patient had always been healthy.

He was well developed and well nourished and in obvious respiratory distress. The blood pressure was 148/100, the pulse rate 130, and the respiratory rate 32.

Physical examination was negative except for the following: A 2 cm. scar was noted over the second intercostal space anteriorly on both the left and right anterior chest. The trachea was slightly deviated toward the left. Respiratory excursions were decreased on the right. The right side of the chest was hyperresonant. the breath sounds were decreased, and tactile fremitus was absent. The left side of the chest appeared normal.

The volume of packed cells was 51, the hemoglobin 16 Gm., and the white blood cell count 7,750 with a normal differential. The urinalysis was normal. X-ray films showed pneumothorax on the right, with the lung totally collapsed and the mediastinum shifted to the left with tracheal deviation (figure 1, A and B).

A thoracentesis was done immediately. The presence of a tension pneumothorax was confirmed. A water-seal drainage was done. The symptoms were relieved, but the lung continued to leak air.

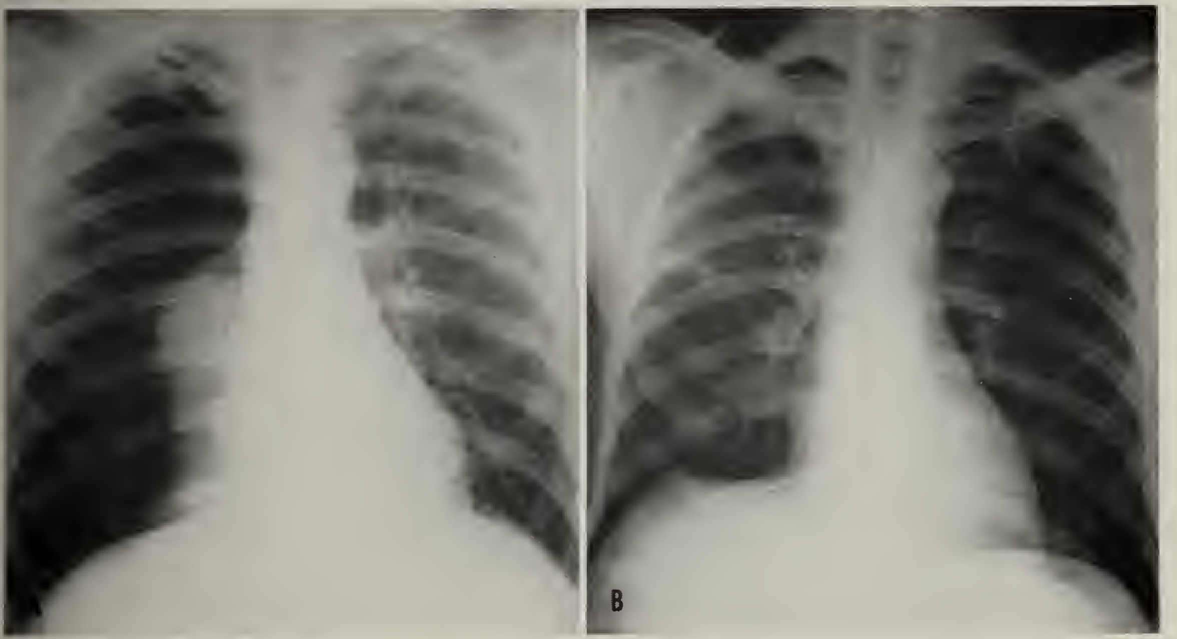

FIG. 1. (A) Progressive pneumothorax on right from rupture of a subpleural bleb. (B) Postoperative roentgenogram—lung reëxpanded.

On June 22, 1956 a right anterior thoracotomy was done under general anesthesia. Upon entering the pleural cavity the lung was almost completely collapsed and 3 ruptured blebs were noted at the apex. The blebs were excised, and the defects were approximated with continuous catgut sutures. U.S.P. talc was sprinkled on the visceral pleura and rubbed on the parietal pleura. The lung was inflated and expanded completely. Two chest tubes were placed for water-seal drainage, and the chest was closed.

The postoperative course was uneventful. The chest tubes were removed on the third postoperative day. The patient was discharged on the ninth day.

## BLEBS ASSOCIATED WITH LOCALIZED EMPHYSEMA

Pleural blebs associated with localized emphysema occur more frequently in the middle- and older-age groups. In 7 of 16 cases spontaneous pneumothorax was the manifestation of the disease. Progressive inflation of intact bleb or blebs, causing shortness of breath, required surgical intervention in 9 cases. The extent and the severity of the associated emphysema can only be determined after visualization of the lung at operation.

The following case report outlines the management of a patient with a large intact bleb with associated localized emphysema.

**Case 2.** A 39-year-old white man was admitted to the George Washington University Hospital on December 29, 1952 because of an enlarging bleb of the right lower lobe. He had had slight dyspnea and a mild hacking cough for 3 months. Three months prior a large cystlike structure in the region of the right lower lobe was seen on a routine X-ray film of the chest. The bleb appeared to be larger on a follow-up film 2 months later. The patient had been an alcoholic for 15 years.

He was well developed and well nourished and was extremely apprehensive. The blood pressure was 130/90, the pulse rate 90, and the respiratory rate 20. Examination was negative except for hyperresonance, decreased tactile fremitus and decreased breath sounds over the right lower lobe. The liver was slightly enlarged.

The volume of packed cells was 55, the hemoglobin 15.6 Gm., and the white blood cell count 11,600 with a normal differential. Kunkel globulin was 6.5 units, thymol turbidity was negative, cephalin flocculation was 2 plus in 48 hours, total protein was 7.02 Gm., with an albumin-globulin ratio of 1.6. The urine was within normal limits. X-ray films showed multiple large cysts in the region of the right lower lobe and compression atelectasis of the surrounding lung (figure 2, A and B).

On December 30, 1952 a thoracotomy was attempted but abandoned because of a fall in blood pressure and

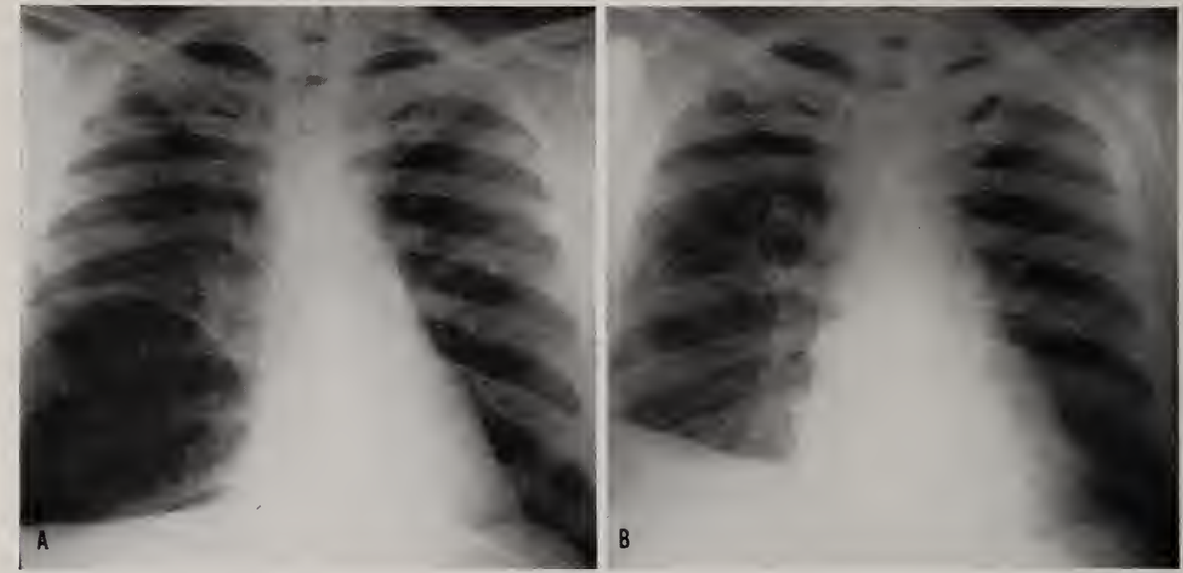

FIG. 2. (A) Large bleb in lower right lung; lesion associated with localized emphysema. (B) Appearance of chest after excision of bleb and small amount of emphysematous lung tissue.

cyanosis. On January 5, 1953 a right posterolateral thoracotomy was performed. A large emphysematous bleb was found to occupy the entire lower one-half of the right hemithorax. It was incised and was then seen to originate from deep within the pulmonary substance of the right lower lobe. There were several bronchial communications. The bleb was excised and the defect approximated following individual ligation of the multiple bronchial communications and adjacent blood vessels. The lung was inflated and filled the pleural cavity. Two chest tubes were placed for water-seal drainage, and the chest was closed.

The postoperative course was uneventful. The chest tubes were removed on the third postoperative day, and the patient was discharged on the eighth day.

## GENERALIZED EMPHYSEMA COMPLICATED BY LARGE BLEBS

Among the 24 patients with generalized emphysema and large pulmonary blebs 11 developed spontaneous pneumothorax. In the remainder progressive inflation of the blebs produced serious respiratory embarrassment requiring an operation.

**Case 3.** A 48-year-old dairy farmer was admitted to the George Washington University Hospital on October 11, 1955 with the chief complaint of a chronic productive cough and dyspnea of 4 years' duration. At the onset the dyspnea was noticeable only upon climbing hills around his farm, but it had become progressively worse. On admission he was unable to walk more than short distances without stopping and resting 2 or 3 times. In the early stages of his illness he had developed a chronic cough which had become productive of purulent secretions. On several occasions during the preceding 2 years he had had hemoptysis of a minimal degree. He had also had difficulty in exhaling, and expiratory wheezing had developed during the preceding year. The local physician had prescribed nebulization therapy for a year which had helped somewhat. However, he was unable to sleep more than 3 or 4 hours without the use of it. In 2 years he had lost 15 lbs.

The patient appeared apprehensive, chronically ill, poorly nourished, and in respiratory distress. His blood pressure was 140/95, the pulse rate 124, and the respiratory rate 20. Examination showed a barrel chest with the A.P. diameter equaling the transverse diameter. Tactile fremitus was decreased bilaterally, and hyperresonance was noted throughout. The breath sounds were decreased bilaterally but more on the right. Scattered fine moist and crepitant rales were heard over both lung fields. Diffuse, loud, coarse wheezing and bubbling rhonchi were noted on maximum and forced expiration. The heart sounds were distant.

The volume of packed cells was 45, the hemoglobin 13.1 Gm., the white blood cells 10,550 with a normal differential count, the sedimentation rate 25 mm. per hour, and the total eosinophile count 69 per cu. mm. Blood serum sodium, chloride and potassium, blood urea nitrogen, and total and fractional proteins were all within normal limits. The oxygen content of the arterial blood at rest was 16.3 vol. per cent, the oxygen capacity 18.1 vol. per cent, the oxygen saturation 89.6 vol. per cent, and the $CO_2$ content 46.18 vol. per cent. Urinalysis was normal.

Roentgenologic and fluoroscopic examinations showed depression of both diaphragms and widening of the intercostal spaces. The entire upper two-thirds of the right lung appeared to be replaced by multiple large blebs with compression of the lung. These blebs did not empty on forced deep expiration. The left lung contained multiple small cystic areas throughout. The left diaphragm moved 2 to 3 cm. on inspiration and the right 1 cm. (figure 3, A and B).

Pulmonary function studies showed a total vital capacity of 2,033 c.c.; timed vital capacity, first second 46 per cent of the total, second second 63 per cent of the total, and third second 75 per cent of the total; maximum breathing capacity 33.8 liters per minute. The tracing showed severe trapping of air.

Treatment in the hospital for the first 2 weeks consisted of bed rest, the use of expectorants, antibiotics, vitamins, sedatives, digitalis and diuretics, a high-calory high-protein diet, and the use of the Bennett I.P.P.B. machine for administering Neosynephrin and Isuprel. The patient continued to cough up copious amounts of purulent secretions despite the therapy.

On November 7, 1955 a tracheostomy was done. Frequent tracheal aspirations were carried out, and the secretions lessened. Dyspnea was strikingly relieved.

On November 11, 1955, under general endotracheal anesthesia, a right posterolateral thoracotomy was performed. When the pleural cavity was entered a huge bleb occupying almost the entire right hemothorax was seen. Difficulties in controlling the patient were encountered by the anesthesist, and the bleb was quickly punctured. The difficulties were corrected immediately. The bleb had multiple bronchial communications, and the base was situated deep within the lung. It was dissected to the base, which was cross-clamped and excised. The defect was closed over with interrupted and continuous chronic catgut sutures. The lung was inflated and filled the entire cavity. Numerous small blebs and bullae were seen studded over the lung. They were not excised. Two chest tubes were placed for water-seal drainage, and the chest was closed.

The patient improved rapidly, and the postoperative course was uneventful. The tracheostomy tube was removed on the tenth postoperative day, and the patient was discharged on the sixteenth day.

The patient has been maintained on a nebulizer as needed and digitalis. A 1-year follow-up revealed that

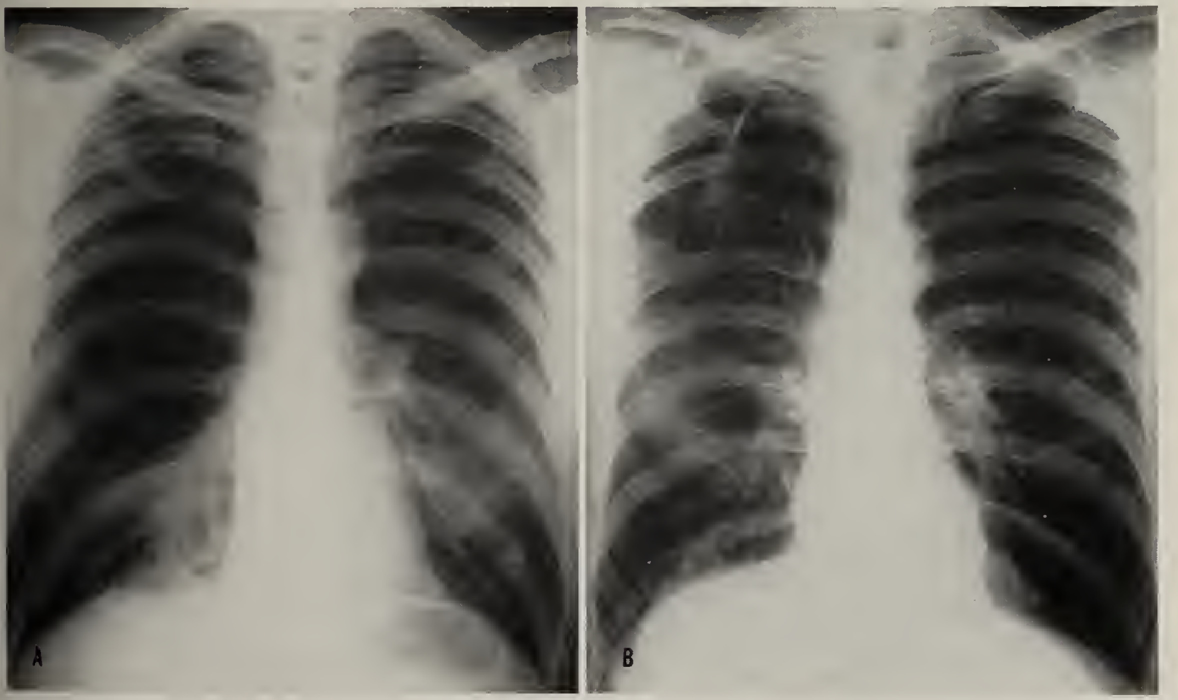

FIG. 3. (A) Giant blebs in both lungs, particularly the right. (B) Postoperative appearance of lungs after excision of large bleb on right.

he continues to be greatly improved. He is able to carry on his farming activities and uses the nebulizer only occasionally.

## General Considerations

The surgical treatment of spontaneous pneumothorax resulting from rupture of subpleural blebs has been highly successful. In a substantial number of cases the initial attack of pneumothorax will be followed by reëxpansion of the lung with no recurrent episodes. The pleural adhesions resulting from the pneumothorax, particularly if needle aspirations or tube-drainage has been performed, result in a protective pleural symphysis.

In cases requiring an open operation the results have been excellent. Excision of the bleb or blebs combined with the production of pleural adhesions has resulted in protection from subsequent attacks. In this series and earlier experiences there are no known recurrences. Early fears that the production of pleural adhesions would result in serious reduction of pulmonary function are not substantiated. The complete pulmonary function studies done by Paul and co-workers[1] on patients treated by excision of blebs and sterile talc poudrage established that no significant changes had resulted from the procedure. One of these patients had bilateral operations.

If there are localized emphysematous changes in the lung adjacent to the bleb or blebs it is usually desirable to excise the involved lung tissue. The amount of lung tissue to be removed can be determined only after visualization of the lesion. Conservation of functioning lung tissue is essential. Total lobectomy is rarely necessary and should be avoided. Since the disease is often bilateral, unnecessarily radical operations are particularly dangerous.

The most difficult and challenging cases are those with generalized emphysema associated with giant blebs as illustrated in case 3. The possibility of gratifying relief from disabling shortness of breath by removal of blebs in these seriously ill patients is not generally known.

Although these patients are poor surgical risks, proper preoperative and postoperative management make surgical intervention reasonably safe.

The excision or obliteration of the large space-occupying bleb allows expansion of remaining functioning lung tissue. In addition to the reduction of tidal air for mechanical reasons the increased carbon dioxide concentration in the bleb is probably distributed to adjacent lung tissue by the phenomenon of air drift between pulmonary lobes and segments.

## Summary

A review of 82 patients with pulmonary blebs who were considered for surgical treatment has been presented.

The surgical treatment of recurrent spontaneous pneumothorax is well established. It appears that many patients with emphysema complicated by large pulmonary blebs can be greatly improved by surgical therapy.

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# SEROLOGIC ALTERATIONS IN RHEUMATIC FEVER[*]

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DURING MOST beta hemolytic streptococcal infections 2 reactions occur in the serum: Antibodies to streptococcal antigens appear which can be measured as an index of present or previous streptococcal activity, and new substances or changes in substances already present in the serum appear. Under the former type of change will be discussed the antistreptolysin O antibody and the streptococcal antihyaluronidase antibody. Under the latter will be discussed the C-reactive protein and the serum mucoproteins. Other changes in the serum will be mentioned only briefly.

## C-reactive Protein

C-reactive protein was first described by Tillett and Francis[1] in 1930. In the course of serologic studies in which the somatic C-polysaccharide of pneumococcus was used it was found that this substance reacted to form a precipitate when added to the acute-phase sera of patients with pneumococcal pneumonia but gave no reaction with sera from the same patients during convalescence. This reaction was found not to be specific for pneumococcal pneumonia but was noted also in the sera of patients with acute rheumatic fever, staphylococcal osteomyelitis, subacute bacterial endocarditis, myocardial infarction, and gram-negative bacillary infections caused by members of the colon-typhoid group, among others. Later studies[2, 3] revealed that when heated above 65°C the C-reactive protein lost its property of reacting with the C-polysaccharide of the pneumococcus, that it was associated with the albumin fraction of serum, and that ionized calcium was necessary for the reaction to proceed. As a result of the latter discovery it was evident that plasma from oxalated or citrated blood could not react even though serum obtained at the same time reacted strongly.

MacLeod and Avery[4] devised a method for the isolation and purification of the C-reactive protein and produced in rabbits a specific antiserum against it which did not react with the proteins of normal human serum. Using this antiserum, greater sensitivity was obtained in tests for the C-reactive protein.

The C-reactive protein has been found useful in following the course of rheumatic fever in the same sense that the erythrocyte sedimentation rate is used. It is perhaps less sensitive than the latter but is more easily interpreted, especially during therapy with the steroids. The total globulin content of the patient's sera decreases in rheumatic fever after ACTH and cortisone are started. A rapid decrease in fibrinogen also occurs. Since the erythrocyte sedimentation rate varies with the globulin and fibrinogen content of the serum, it is not surprising that the rate falls rapidly during ACTH and cortisone therapy as well as with liver disease.

The C-reactive protein, on the other hand, is a special protein not normally present in the serum, formed in response to inflammatory stimuli, and associated with the albumin fraction. This protein also decreases after cortisone and ACTH therapy. Whether this is a result of suppression of stimuli which provoke this special protein or whether a nonspecific change is not known, but its reappearance after termination of adrenal therapy is considered more indicative of continuing rheumatic activity than a rise in the erythrocyte sedimentation rate, since the former depends on a single abnormal factor while the latter is influenced by many changes in the blood. However, resumption in therapy is not indicated unless time has elapsed for spontaneous subsidence of titers, since a simple suppression of the adrenal cortex due to therapy is also considered to cause a rise in the titer of the C-reactive protein.[5, 6]

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[*] From the Department of Pediatrics, Georgetown University School of Medicine.

The C-reactive protein is considered today by many investigators to constitute the most sensitive index available of the continued activity of rheumatic fever.

## SERUM MUCOPROTEINS

Retention of certain non-dialyzable nitrogen-containing substances in the filtrate following treatment of serum with some of the standard protein precipitants has been demonstrated repeatedly. Variations in the content of these substances in the serum have been shown to occur in human disease with notable elevations reported for cancer and severe infections. Winzler[7] classified these materials as mucoproteins.

The early increase of serum mucoprotein-tyrosine in infections might reflect their association with nonspecific mechanisms of adaptation. The coincident rise of C-reactive protein under similar conditions in many infections might point to close relationship were it not for the fact that complete absence of the C-reactive protein from normal serum differentiates it from proteins of the mucoprotein group.

Although generally well correlated with the erythrocyte sedimentation rate the mucoprotein concentration often lags behind the sedimentation rate in its return to the normal range. In patients treated with ACTH the serum mucoprotein level, unlike other indices, often does not become normal for long periods after hormone therapy has been started. Following institution of therapy a plateau frequently develops in the downward slope of the curve where none develops in the C-reactive protein or the erythrocyte sedimentation rate. Furthermore, transient upward swings are sometimes observed. These findings suggest that the serum mucoproteins may furnish indications of persistence and fluctuations in rheumatic activity in the face of hormone therapy which is not provided by the conventional indices of activity of this disease process (viz., C-reactive protein and erythrocyte sedimentation rate). In patients treated with hormone therapy, use of the serum mucoprotein level would abolish the frequent recrudescence of disease activity (clinical rebound) which occurs when the erythrocyte sedimentation rate is used as the sole criterion determining the time for discontinuance of treatment.[8]

Kelley et al[9] decided that the serum mucoprotein level remains elevated as long as the disease actively persists in patients with chronically active rheumatic fever and that the concentration provides a comparatively reliable objective index of changes in the degree of activity of the disease.

## ANTIBODIES TO HEMOLYTIC STREPTOCOCCI GROUP A[10-13]

There are at least 12 groups of streptococci, of which group A plays the leading role, causing at least 95 per cent of human streptococcal infections. Antibodies are formed against various parts or products of hemolytic streptococci during infection. These antibodies are stimulated either by somatic or extracellular antigens of streptococci. The somatic antigens of group A include the group specific C-carbohydrate, the type-specific M-proteins, nucleoproteins which are common to many cocci and include the cytoplasmic particles (c.p.) and the nuclear fraction (s), and finally the T proteins, of which some are type-specific and some common to several types. Relatively little work has been accomplished with these somatic antigens compared to the extracellular antigens. This group includes streptolysin O and S, streptokinase (fibrinolysin), hyaluronidase, proteinase, desoxyribonuclease (dormase), ribonuclease and erythrogenic toxin. Of these, most investigation has centered on the antigens, streptolysin and hyaluronidase, and the antibodies, antistreptolysin and streptococcal antihyaluronidase.

Streptolysin O is an extracellular hemolysin elaborated by most strains of group A streptococci. The antibody, antistreptolysin O, which neutralizes its hemolytic properties in vitro, occurs in the sera of animals following injections with large amounts of cell-free streptolysin or after suitable streptococcal infections. Some patients, however, even though infected with hemolysin-O-producing strains, fail to develop antistreptolysin O. A rising titer of this antibody after an infection is strong presumptive proof of its group A streptococcal etiology. Such antibody protection frequently observed in rheumatic fever patients has furnished very convincing evidence that group A streptococcal infections are precursors of the rheumatic attacks. Between 80 and 90 per cent of rheumatic fever patients have been shown to develop abnormal amounts of antistreptolysin O in their sera.

Hyaluronic acid, hyaluronidase and antihyaluronidase have attracted considerable attention with respect to a possible pathogenic relationship in rheumatic fever. This acid, a highly viscid polysaccharide, makes up the capsules formed by many streptococci belonging to group A. It has only slight significance to the virulence of the group A strains. Hyaluronic acid is widespread in the bodies of vertebrates, notably in the umbilical cord, vitreous humor, synovial fluid, and the interfibrillar cement substance of collagen. Enzymes that split it are designated hyaluronidases, and several have been described from different sources: leech heads, mammalian testicular extracts, groups A and C streptococci, pneumococci, staphylococci and clostridia. Although the common action is the same, the antihyaluronidase produced is specific for one source. Three technics for demonstrating hyaluronidase have been employed: mucin clot solution, turbidity reduction and the spreading factor technics.

Newborn babies have practically the same streptococcal antihyaluronidase content in their sera as is present in that of the mother, but this disappears within 6 months. Beginning at 3 to 5 years, this antibody begins to appear with a slowly increasing frequency until at 20 years it reaches and maintains a level, and at 60 years it drops slightly. This phenomenon reflects roughly the occurrence of group A streptococcal infections in a considerable portion of the population.

Studies by Friou on antihyaluronidase derived from hemolyticus group A, type 4 revealed a parallel change in titer of antihyaluronidase, antistreptokinase and antistreptolysin O.[12] Antihyaluronidase was shown to be concentrated in pooled, purified gamma globulin. It was also found that rheumatics tend to have higher levels of hyaluronidase inhibitor than do others following streptococcal infections, but the pattern of rise followed closely the changes in other antibodies in rheumatic fever.

Anderson et al[13] presented evidence that the presence of 2 or more types of streptococci during an infection calls forth a greater antibody response than does 1 type. Early and effective penicillin therapy prevented entirely or greatly decreased the expected antibody response to streptokinase and streptolysin O. No effect was apparent on the total antibody response as measured by the serum gamma globulin. Those who developed rheumatic fever were found to have higher antibody titers and gamma globulin levels even at the onset of the streptococcal infection than those who do not develop rheumatic fever. This finding seems to support the pathogenetic theory that hypersensitivity to antigens determines the rheumatic fever victim of streptococcal infections.

Various investigators have completed studies in an attempt to discover a pattern of response of streptococcal antibodies in rheumatic fever, and the value of more than one laboratory procedure in the diagnosis of rheumatic fever. Harris[14] compared the mean titers in rheumatic and streptococcal infection by 4 serologic tests, namely, the CP (cytoplasmic particles), S (nuclear fraction), antistreptolysin and antihyaluronidase. His work indicates 2 conclusions: First, the mean titers obtained in all tests are higher in rheumatic than in the streptococcal group; second, this difference is greater in the case of antihyaluronidase than with the other 3 tests. The factor of time from onset has been excluded as explaining these higher titers. A possible explanation is that rheumatic fever follows those infections which result in higher antibody levels, but this does not mean that this category of streptococcal infections is necessarily identical with the most severe ones.

Of the antihyaluronidase and antistreptolysin tests the former is quantitatively the better and in addition is a test in which the titers exceed those found after streptococcal infection.

The application of these tests to the diagnosis of active rheumatic fever is severely limited. First, the antistreptococcal antibody titer found on testing must be distinguished on a quantitative basis from those found in a "normal population," and the presumably normal range is subject to the variations in the epidemiology of streptococcus hemolyticus. Second, the streptococcal antigens used in these tests are not only not specific to rheumatic fever but are specifically related to a human pathogen, streptococcus hemolyticus, and therefore variations in the virulence and antigenicity of the organism will affect quantitatively the results of the test. These considerations will apply to all tests which measure antibodies to streptococcal antigens.

These results confirmed those of Rothbard,[15] who, in order to determine whether there was any basic difference in the patterns of streptococcal antibodies in patients in whom rheumatic fever develops as compared with those who have purulent complications or make uneventful recoveries after hemolytic streptococcal infection of the upper respiratory tract, studied the immunologic responses of a variety of antigens in a large group of patients and decided that no single pattern of antibody response could be used to diagnose the existence of rheumatic fever in any single person, although it was noted that patients with rheumatic fever as a group exhibited rises in antistreptolysin O and antifibrinolysin and type-specific antibodies more frequently than did that group of patients who had purulent complications or who made uneventful recoveries.

## SUMMARY

The major alterations in the serum of patients with rheumatic fever have been reviewed. These changes fall into 2 groups: the nonspecific changes due to tissue damage and inflammation, exemplified by the appearance of the C-reactive protein, and the rise in level of serum mucoproteins, and by the more specific response to streptococcal antigens, exemplified by the rise in titer of antistreptolysin O and antihyaluronidase. The relative merits have been discussed, and the tests that measure nonspecific tissue damage have been compared to the erythrocyte sedimentation rate with respect to steroid therapy. It has been emphasized that there is no test nor pattern of a variety of tests that is diagnostic of rheumatic fever.

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# CONGENITAL CATARACTS*

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A CATARACT is defined as any opacity of the lens or its capsule, but the term is not generally used until lenticular opacification is of sufficient degree to cause limitation or diminution of vision.

Cataracts may be classified in several ways:

1. According to the time of occurrence they may be congenital, juvenile, presenile, or senile.
2. According to their location cataracts may be subcapsular, cortical, or nuclear.
3. According to their development they may be stationary or progressive at various rates of growth.

Lenticular opacification may also result from trauma, such as a contusion, or a penetrating wound of the eye, many types of chemical intoxication, and excessive exposure to ultraviolet light, radium and X-rays. Workers involved in certain occupations may have an increased tendency to form cataracts (glassblowers' cataract, furnace-workers' cataract, and electric cataract). Dietary deficiencies, glandular dysfunctions, metabolic diseases, and inflammatory conditions are all known to be associated with the formation of cataracts.

This discussion will be limited to that group of conditions in which the normal development of the lens fibers and epithelium has been affected during growth by hereditary, nutritional, or inflammatory changes with resultant loss of transparency.

The growth and development of the lens in the embryo progress in such a way that new fibers are constantly being laid down around a central core. Injuries to this embryonal tissue may affect the course of development in one of several ways. If there is damage to newly formed lenticular fibers without producing a progressive lesion or interfering with the normal development of the lens the opacity which results may be zonular (lamellar) or localized with an arcuate or spoke-shaped opacity.

Lesions of either zonular or arcuate configuration may initially lie in the subcapsular regions. However, as new fibers grow outside the damaged zone they become farther from the capsule and relatively closer to the central core.

This zonular or lamellar cataract is one of the most frequent types of congenital cataract if we include the type that occurs within the first year of life. This cataract consists of a zone of lamellar opacities surrounding a clear or almost clear zone in the manner in which an orange peel surrounds the fruit. The zone of opacity is surrounded in turn by clear cortex, and this peripheral transparent zone usually affords a means by which the fundus can be visualized. From the margins of the opacity short striae (called riders) are often seen projecting into the transparent cortex. The cataract is most dense at the margin of the disc and somewhat lighter in the center. This helps to distinguish it from nuclear cataracts.

The zonular cataract interferes with the vision of the eye according to its density and its size, and vision varies between recognition of hand movements and 20/30. The size of the opacity seems to be dependent upon the state of development at the time of the lens damage—the earlier the disturbance the smaller the opacity. Experimental evidence on rats indicates that zonular opacities commonly seen in congenital cataracts represent insults to the lens at the time in embryonic life when the opaque fibers were being formed. The nature and cause of these intra-uterine injuries is still the subject of intense investigation. However, this type of opacity is often hereditary and frequently associated with a history of convulsions and with the changes of rickets, especially in the teeth and cranial and other bones.

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Zonular cataracts are nearly always bilateral, and there is, as a rule, equal involvement of the two eyes. It is now generally accepted as a fact that this type of cataract may occur either as a prenatal or as a postnatal development.

One of the groups of congenital opacities which cause no interference of vision is the anterior axial embryonal cataract. This, according to one author, occurs in 25 per cent of all individuals, and thus may be the most frequent form of congenital cataract. It consists of multiple fine opacities that are irregular in form. In direct light these appear as white, chalk-like bodies which on occasion may have a crystalline appearance and be surrounded by a faint halo. They are usually multiple and like most congenital cataracts are stationary.

Punctate cataracts (*cataracta punctata*) are small, scattered grey or light blue opacities found in the extreme periphery of most young lenses. When those opacities are scattered throughout the lens without involving the embryonal nucleus they are called punctate cataracts. Coronary cataracts are somewhat similar, having club-shaped, pear-shaped, or oval opacities in the peripheral cortex. Both tend to be stationary and cause little reduction in vision. They are usually bilateral and may occur in more than one member of a family.

Congenital cataracts of the anterior pole of the lens have been classified by Bellows[1] into 3 groups, (1) anterior or pyramidal (central punctiform) cataracts, (2) capsular flakes, and (3) circular cataracts.

Anterior polar or pyramidal cataracts consist of a sharply circumscribed opacity of the anterior lens capsule. The opacity varies greatly in size from a pinhead to an opacity which may fill the pupillary area. It is often laminated and is a conical projection in many cases, being directed somewhat toward the nucleus but usually projecting above the lens. At times there may be a fine thread connecting the opacity to the cornea. The visual loss is dependent upon the size of the opacity, and is usually slight, if any. Like most congenital cataracts it usually remains stationary. However, cases have been reported in which the opacity progressed to complete opacification. This cataract is usually bilateral and is sometimes associated with other types of opacities. The dotlike opacity can be seen to move in the same direction as that in which the eye is rotated.

Posterior polar cataract is a congenital form of capsular opacity consisting of a small, round, white deposit situated at the posterior pole. This "posterior lens dot," representing the remnant of the attachment of the hyaloid artery in fetal life, is very common, and although it rarely causes interference with vision it must be distinguished from posterior lenticonus. In this latter condition there is a gap in the posterior capsule which is very thin at the pole of the lens and which bulges toward the vitreous. Posterior polar cataract may occur with posterior lenticonus or with a persistent hyaloid artery. On examination with the ophthalmoscope a posterior polar cataract will appear to move opposite to that of the movement of the eyeball. These cataracts cause little interference with vision and rarely require treatment.

Total congenital cataract is a relatively rare condition. It has been said to differ from central and lamellar cataracts only in that a larger portion of the lens is involved. In addition to complete opacification, there are some in which a small portion of the lens may remain relatively clear. At times the cataract is shrunken, and usually both eyes have the same degree of involvement.

Congenital cataract associated with rubella in the mother is an entity now well established. In 1940 Gregg[2] observed a large number of cases of congenital cataracts which appeared after a severe epidemic of German measles in Australia. Since that time hundreds of cases have been reported. However, in many the diagnosis of rubella has been made in retrospect and is more or less presumptive, since the infection was only considered seriously after the birth of the infant with the congenital abnormality. Nevertheless, there is sufficient evidence to indicate that the risk of congenital defects is great if maternal rubella occurs during the first trimester of pregnancy. Two main types of cataract are observed. In the first there is a pearly white central opacity with a smaller, clearer peripheral zone. In the second type the entire lens is opaque. The process involves all but the outermost layers of the lens, is usually bilateral, and is considered to have begun in embryonic life.

Since the mother suffered from the infection during the early stages of the pregnancy, it would seem that the virus of rubella shows a preference for developing embryonic tissue and reaches the fetal organs involved in the stage of their development by way of placental transfer.

Several theories have been proposed to explain the lenticular involvement, and among those most prominently held are the following: A number of authors believe that, because of the high incidence of congenital heart disease found associated with this condition, the rubella virus has a primary affinity for vascular tissue, and the lens damage is explained by possible indirect action through the hyaloid artery. In addition to this mode of transmission of "blood stream to placental tissue" it is also considered that the eyes of the embryo could be affected directly by contact with amniotic fluid which harbors the toxic agent. This theory evolved following a study by Cordes and Barber[3] of an 8 weeks' embryo with a history of a rubella infection in the mother in the sixth week of pregnancy. The changes found were retardation of development and differentiation of the lens while the entire posterior portion of the eye seems normal. Even with these proposed theories no satisfactory explanation has yet been given for the occurrence of this condition.

Many cases of congenital cataract of a hereditary nature have been reported as occurring in several members of the same family and in different generations of the same family. In 1905 Nettleship[4] made a complete report on hereditary cataracts from a review of the literature and his records. From these he offered 6 observations concerning the occurrence of cataract in families, which seem to apply to most cases:

1. The descent is direct. No generations are skipped, but children of a family not having cataracts can feel assured that none will develop.
2. If the children of one family have cataracts, the liability of the next generation is increased.
3. Transmission of like sex to like sex is most common.
4. The cataracts tend to appear earlier in life in succeeding generations.
5. The age of onset is approximately the same in persons of the same generation.
6. The families with cataracts are not affected as to fertility, health, or longevity.

If the reader desires more information on this subject, he may consult references 5–10.

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# A BIOGRAPHICAL SKETCH OF ANTOINE LAURENT LAVOISIER

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IN THE MIDST of the terrible frenzy of the French Revolution, when the streets of Paris ran red with the blood of the "damned aristocrats," victims of the insatiable hunger of *Madame le Guillotine,* a busy scientist worked in his chemical laboratory in Paris. The experiment on which he was so earnestly working had nothing to do with wars or revolutions; he was probing for hitherto unrevealed secrets of physiologic chemistry. His associate, Seguin, who was his subject in this experiment, was seated on a chair in the laboratory. The scientist had enclosed him in a hermetically sealed, varnished silk bag, perfectly airtight except for the slit over his mouth for breathing. Even this slit had been carefully glued around Seguin's mouth by a mixture of pitch and turpentine. There was much work to be done, for everything emitted from Seguin's body was to be saved in this silk bag and carefully analyzed. Even the air which he exhaled was carefully collected into flasks and preserved for analysis. Weighings had to be made, weighings of everything—yes, even of Seguin,—numerous weighings, time-consuming but important, on the most accurate balances in all France. As the scientist worked over his human subject, he slowly dictated notes to his young wife beside him. As the din of the bloodthirsty citizenry outside grew suddenly louder, he was interrupted by the sudden and violent opening of the laboratory door, through which stepped a pompous, red-capped revolutionist followed by soldiers and an outraged mob. From that time Antoine Laurent Lavoisier was a prisoner of the Republic. The interrupted experiment, of great importance to medicine, was never to be finished, for even this man, who had served his country for years with unselfish devotion and against whom the worst charge that could be brought was the false one of having watered the soldiers' tobacco, became also a victim of the guillotine.[1]

The greatest crime of the French Revolution had been committed in the killing of this man, who was one of the three or four greatest men France has produced.[2] A mathematician of the time, Lagrange, said: "A moment was all that was necessary in which to strike off his head, and probably a hundred years will not be sufficient to produce another like it."[3] It would be interesting to learn something of the life of this man and to learn the reason for his greatness and also the reason for his untimely and unfortunate end.

Antoine Laurent Lavoisier was born in Paris in 1743. He is one of the very few really great persons who had the good fortune to be born into the lap of luxury. His people, although very rich, were "of the people rather than of the Aristocracy."[4] One needs only to trace his ancestry back a few generations to find a postrider, a bailiff, a merchant, and an attorney among them. His father was a procurator of Parliament who married the daughter of a very wealthy advocate whose family name was Punctis. Antoine was the only son of this marriage, and his only sister, Marie Marguerite Emilie, died when she was 15 years of age. His mother died when Antoine was only 5 years of age, and he and his sister were entrusted to the care of their maternal grandmother and an unmarried aunt for their rearing and education, even though their father did make his home with the Punctis family also. Young Antoine showed great promise very early, and the very wealthy Punctis family lavished money on his education.[4, 5] This wealth, which was so fortunate for him now in giving him every opportunity, was later to be one of the causes of his death, for the time was coming and even at this time was brewing when even a little wealth was a dangerous thing, and many lost their heads because of it.

Lavoisier was sent to the famous College Mazarin,[6] purportedly to follow in his father's footsteps and become a lawyer.[3] Holmyard[5] says that at the age of 21 he was a fully qualified lawyer attached to Parliament, but Gibson[3] says that before he reached his twentieth year he deserted law for chemistry. At any rate he did become interested in chemistry as a result of attending some lectures given by Rouelle at the Jardin du Roi. These lectures of Rouelle, who was a very famous and popular chemist of the time, were given with a view of interesting the elite of Paris in the science of chemistry. It was quite the thing socially to attend these lectures, and anyone who was really up in Parisian society of the time never missed one if he could help it. These lectures continued for several years, and for 3 years the encyclopedist Diderot attended them and recorded them word for word; and Lavoisier referred quite often to this record of Diderot in his early chemical experiments.[5]

While at the College Mazarin he studied under such famous men as Lecaille, who taught mathematics and astronomy, and Bernard de Jussius, who taught botany.[6] His type of scholastic record is reflected in the fact that in 1760 he took second prize in rhetoric at Mazarin.[4]

In 1765 Lavoisier received a gold medal from the king for the best essay on how to light the streets of a large city. It is in this essay that he first exhibited the extreme accuracy and thoroughness which characterized all of his later experiments. It is said that in the preparation of this essay he spent 6 weeks in a darkened chamber in order to render his eyes more sensitive for photometric purposes.[4] In the same year he presented his first paper before the Academy of Sciences on the analysis of gypsum.[4] Three years later he was elected a member of the Academy, a high honor for a young man of 25.

His first beginnings in the work that was to make him famous was his well-known experiment in which he boiled water for a hundred days in order to prove that heat did not convert water to earth as had been previously believed. This was in the year 1770.[7] Chemistry had been on the verge of great discoveries for nearly a hundred years. Many workers had done many things; some had actually made great discoveries without knowing it. The cause of this was an almost impenetrable barrier in the way of discovery which was set up by the invention of the theory of phlogiston in about 1680. The invention of this theory is attributed by some writers to Beches and by others to Stahl, but Stillman[8] says that it was originated by Becher and later elaborated by Stahl. At any rate, it conceived of all combustible matter as containing some fire stuff which was called "phlogiston." This was a very elusive and fickle substance. Sometimes it possessed weight and sometimes buoyancy. It blinded the eyes of scientific workers for about a century and prevented the correct interpretation of their findings and, in come cases, discoveries. Lavoisier's overthrow of the old belief of transmutation of water into earth by his hundred-day experiment was his first step in the overthrow of this pernicious theory, the great work by which he is most remembered.

In 1771 he married Marie Anne Pierrette Paulze, 14-year-old daughter of a fellow member of the Ferme Generale[4] (about which you will hear more later), and from all accounts the marriage was a very happy one. Madame Lavoisier was very zealous for her husband's success and studied language in order to translate chemical treatises from other languages into French for him, and she did sketching and engraving to illustrate his writings. She seems to have been a devoted wife, eager and willing to do anything to help her talented husband in his great work and to make him happy. Twenty years after Lavoisier's death she married another famous chemist, Count Rumford, but this marriage was apparently not at all a happy one.[3]

At various times throughout his life Lavoisier's ability was recognized by his government, which placed him in responsible positions of public service. In 1775 he was nominated Commissioner of Powder and in the following year became director of the gunpowder factory. These positions carried a great deal of authority and made him responsible to the government for the manufacture and supply of all gunpowder. Soon after the first appointment he and Madame Lavoisier went to live in the arsenal, which soon became a rendezvous for such famous men as chemists Berthollet, Darcet, Macquer and Priestley, mathematicians Laplace and Lagrange, and the versatile Benjamin Franklin. They were attracted not only by the fine dinners prepared by Madame Lavoisier, but also by the refreshing and extremely interesting works and ideas of their young chemist-host. From these associations a group was formed later to revise chemical nomenclature. As a member of the Committee on Agriculture he tried to introduce scientific methods into agricultural practice.[5] In 1790[9] he was appointed to the Commission on Weights and Measures, which worked out the metric system of measurement now in daily use in so many countries of the world.[3]

Lavoisier had become a member of the Ferme Generale in 1768.[4] The Ferme was a commercial organization which paid a royalty to the king for the privilege of collecting taxes. Most of its members were very wealthy, and many of them were very unscrupulous in their dealings with the taxpayers. Although there is no reason to believe that Lavoisier ever acted as a tax collector in any but an honest and kindly way, he was not exempt from the hatred that grew among the people for the Ferme and its members.[3] To add to his unpopularity with the Republic after the fall of the Bastille was the fact that he had vigorously defended the Academy of Sciences when it had been ordered abolished by decree of the National Assembly in 1793.[4] The Academy had been a great and good influence in science and Parisian society, and Lavoisier was terribly grieved when it was abolished. At any rate, he and the other members of the Ferme were arrested in May, 1794 by the soldiers of the Republic. The circumstances of his arrest have already been related. Marat (a chemist who held a grudge against Lavoisier for having exposed him as being a very poor chemist when he sought election to the Academy of Sciences years before), a member of the National Assembly, denounced him before that body as "a master of charlatans."[1] At his trial, which was almost immediately after his arrest, Dupin, a member of the Assembly, called him an enemy of the Republic[9] and accused him (though falsely) of watering the soldiers' tobacco and of appropriating revenue that belonged to the state.[1, 5] Other men had died for less, and although his friends appealed for his life on the grounds that he had done only good for the state and brought glory to France by his discoveries, it was all in vain.[3] The President of the Tribunal, Coffinhal, coldly dismissed the appeal with: "The Republic has no use for savants."[2]

He accepted the decree calmly, as we may see from a letter written by him to his cousin on the evening before his execution. It is probably the last letter he ever wrote, and reads:

> "I have achieved a passably long career, above all very happy, and I believe that my memory will be accompanied with some regrets, perhaps with some glory. What more could I desire? The emergencies in which I find myself enveloped will probably avert from me the inconveniences of old age. I shall die complete, which is an advantage that I ought to estimate with the number of those I have enjoyed. If I experience some painful sentiments, it is that I have not done more for my family; to be deprived of everything and not to be able to give to them, to her, nor to you, some pledge of my attachment and of my gratitude. It is then true

that the exercise of all the social virtues, important services rendered to my country, a career usefully employed for the progress of the arts and of human knowledge, do not suffice to preserve a man from a disastrous end and to prevent him perishing like a guilty person.

"I write to you today because tomorrow it will perhaps not be permitted me to do it, and because it is a sweet consolation for me to occupy myself with you and with persons who are dear to me in these last moments. Do not forget those near who are interested in me, that this letter may be communicated to them. It is probably the last that I shall write you."[4]

Fifteen were in the cart which carried him to the *Place de la Revolution* that morning of May 8, 1794. Three preceded him to the scaffold of the guillotine. His father-in-law was the third; he, Lavoisier, was the fourth. The report of the usher of the Military Tribunal for that date was: "I have been to the prison of the tribunal for the execution of the judgment pronounced today against Lavoisier, condemning him to death, after which I handed him over to the responsible official and to the *gendarmerie*, who took him to the *Place de la Revolution* (now *Place de la Concorde*), where, upon a scaffold erected upon the said *Place*, the aforesaid Lavoisier, in my presence, suffered the pain of death."[10] The placing of his body in an unmarked grave[2] was the finishing touch to the greatest crime of the French Revolution.

The French people themselves were quick to realize this and to regret. A year later the same Dupin who had denounced the Ferme to the Assembly introduced a resolution for the restitution to the widows and heirs of the "financiers unjustly condemned,"[4] and thus meager justice was attempted. In October, 1795 the Lycee des Arts unveiled a bust of Lavoisier with this inscription[4]:

"*Victime de la tyrannie,*
*Ami des arts tant respecté,*
*Il vit toujours par le genié*
*Et sert encore l'humanité.*"

By this time Robespierre, as well as the others, was dead, and the terror was over.

The works of Lavoisier are too lengthy and cover too wide a range of subjects to be included in any detail here. They have been collected into 6 large volumes and published by the French government, and the interested reader is respectfully referred to them for further details.[11] I shall discuss his works chiefly in the field of chemistry, for that is the field in which he is really remembered, although it is an interesting note to find as an indication of his varied activities that he once started to write a drama, *La Nouvelle Héloise*. It was never finished.[12] Medicine has benefited greatly by his work.

It is said of him that he was "less a discoverer than a clear interpreter of the results of others,"[13] and that he showed a remarkably clear insight into the causes of phenomena.[14] His work is distinguished by his systematic consideration of quantitative relations,[15] and he was the first to really stress the use of the balance in chemistry. He was the first to introduce the chemical equation to represent every chemical change and to insist that the two sides of the equation must exactly balance each other.[3] He was at least one of the first to conceive of the law of the conservation of matter, and his work was only the beginning of a series of experiments performed by him and other chemists to finally establish that law as a scientific fact.[14]

We have already seen how he disproved an old idea of transmutation of water into earth by his famous hundred-day experiment, and now we shall see how he came to overthrow another old theory which had throttled scientific progress for almost a century. The discovery of oxygen by Priestley and Scheele independently in 1774 was the start of this reform. Of course, the name oxygen was not yet in use and Priestley, in accordance with the phlogiston theory, called the new gas "dephlogisticated air," and Scheele called it "empyreal air."[16] Soon after his discovery Priestley showed Lavoisier how to prepare oxygen from red oxide of mercury,[14] and Lavoisier almost immediately repeated Priestley's experiments and made good use of his accurate analytical balances. Early in 1775 he described his results to the Academy of Sciences, and one of the few blots on his record, so to speak, is that he failed to give Priestley credit for suggesting the experiments to him.[15] Several writers seem to feel that this was his one great failing—the unscrupulous appropriating of the merits of others to himself.[15, 17] Holmyard[17] accuses him also of having passed off facts of Cavendish's as his own. At any rate, his conclusions from the experiment were far different from those of Priestley, and they at least were his own.

After a number of other experiments on burning metals, finally in 1777 he advanced a complete theory of combustion, disregarding the old phlogiston theory entirely and giving air as a necessary component of combustion and as being used up in definite quantities in the process.[15] Further experiments with oxygen led him to prove in 1779 that the "fixed air" of Black was a compound of carbon and oxygen, which we know today as carbon dioxide. He called it carbonic acid.[18] He began to think of oxygen as an acidifying principle and did some experiments on nitric acid which seemed to support that conception, which he called *principe oxygine*,* and from which came the short name, oxygen.[15] Holmyard[19] quotes Professor H. E. Armstrong as saying: "In designing the word Oxygen, Lavoisier rose to the greatest height of his unparalleled genius." I am inclined to disagree with Professor Armstrong, for we know today that all acids do not owe their character to oxygen as Lavoisier misled chemists of his day into believing.

After several years of such experimentation, Lavoisier was ready to make his formal attack on phlogiston. This he did in a paper, "*Reflexions sur le Phlogistique*," read to the Academy in 1783. He says vehemently:

> "Chemists have made of phlogiston a vague principle which is not rigorously defined, and which consequently adapts itself to all explanations into which it may be brought. Sometimes this principle is heavy, and sometimes it is not; sometimes it is free fire; sometimes it is fire combined with the earthy element; sometimes it passes through the pores of vessels, and sometimes they are impenetrable for it. It explains at once causticity and non-causticity, transparency and opacity, colours and absence of colours. It is a veritable Proteus which changes its form at every instant."[17]

Venable[14] fixes the date 1786 for the overthrow of the phlogiston theory, but I am more inclined to believe that its date is 1789[20, 21] when Lavoisier published his textbook, "*Traité Élémentaire de Chimie*." He not only disregarded the phlogiston theory entirely in this book, but he also used a new terminology worked out by him. "Inflammable air" became hydrogen, "phlogisticated air" became nitrogen, oxygen compounds, oxides, etc. He considered the metals as elements, and was the first to do so, because all other chemists thought they were combined with phlogiston. He gave a list of 33 elements, 23 of which are considered as such today.[15] His conception of heat as "the result of invisible motion of the particles" (of a substance)[14] was only one of several of his works which "paved the way for the atomic theory."[3]

The book caused quite a furore among scientists. Most of them objected very violently to having their pet phlogiston so rudely taken away from them, but mny of them also finally became converted. At Berlin they burned Lavoisier in effigy, but then very speedily accepted his new theories.[22] Priestley was the most doughty and uncompromising champion of phlogiston, and he defended it to the day of his death.

As a final death blow to the old order of things, Lavoisier associated with himself three other chemists, Berthollet, Guyton de Morveau and Fourcroy, and developed a new system of nomenclature based on the new conceptions.[22] This alone would be enough to assure him of eternal remembrance, but the fact that he helped to devise the metric system of weights and measures gives him an added claim.

It is hard to close the account of his life and works. There is so much to be said that has not

*(Continued on page 160)*

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* Acidifying principle—*Greek.*

# President's Page

## POLIOMYELITIS VACCINATION CAMPAIGN

The program for vaccination against poliomyelitis, sponsored by the Medical Society in coöperation with the D. C. Department of Public Health, is well under way. The Medical Society promptly accepted this responsibility in response to a directive from the AMA's Board of Trustees, following a recent meeting of its special Polio Committee in Chicago. Dr. P. A. McLendon represented the D. C. Medical Society at this meeting.

Your Society (by action of the Executive Board on January 28) accepted this program as a service to the community. It endorses "mass inoculation" against poliomyelitis as a necessary means to the success of the program in this area. Professional, and, to a greater extent, public apathy can be thwarted mainly by sustained medical interest.

Highlights of the meeting in Chicago brought out these significant statements:

1. The vaccine is safe, efficient, and "non-provocative" (even in epidemics).
2. Two doses at 2 to 4 weeks' intervals has high preventive value; a third dose 7 months later is 75–80 per cent efficient.
3. Paralytic polio has a higher incidence in the 20- to 40-year age group, and in pregnant women.
4. No case of paralytic polio has been proven in a person who had received 3 doses of vaccine.
5. The total case load of polio was reduced (in 1956) in areas with a high vaccination ratio as compared to a similar area with a low ratio of vaccination.

Dr. Montgomery Blair, Jr. is Chairman of the Society's Committee on Polio Prevention. I appeal for your enthusiastic support of this activity.

Ralph M. Caulk

# Editorials

## ANTICIPATING THE FUTURE

The method of rendering medical service is changing. How is it changing? Are the trends in the right direction? Should our Society, the State societies, and the American Medical Association be doing something more about it? Do we know just what is happening? How can we find out? What should we, and what can we do?

The healing arts professions, who render the services, should assume leadership and help develop the trends properly, for change is inevitable. The healers and the public want something better. We must make sure that the product is a better one. The increasing complexity of medical practice and the staggering cost of serious illnesses are the two major problems. Politics enters the scene in a big way.

Among the 34 committees of the Medical Society of the District of Columbia, composed *in toto* of 373 members of the Society, not one is greatly concerned with the broad aspects of the future of medical practice. Is it not advisable to have a committee whose function is solely to study trends, to try to look into the future, and to attempt to provide answers for the problems? Such a committee—call it what you may—should be composed of a few carefully selected men—men of experience and broad vision. The committee would be a study group, a deliberative body, who would sit down and mull over the problems confronting us and in a philosophical way look into the "crystal ball" for the answers.

Thus far, organized medicine has done little more than object to proposals, particularly those originating in the halls of Congress, usually with very good reasons. But what has it offered as solutions? It is high time it took a positive stand instead of largely a negative one. It is only by dedicated effort that this can be done. The proposal made herein by an elderly medical statesman would be a start in the right direction.

## AUTOMOBILE ACCIDENTS

One of the important causes of death in the United States is automobile accidents. Personal nonfatal injuries are very numerous, and the amount of property damage is incalculable. Very often we read in our daily paper of the part played in such accidents by mechanical defects in the automobile—brakes, tires, accelerator, and so on. What all too frequently escapes notice is that the car does not drive itself; it is operated by a human being, subject to the various frailties that human beings are heir to.

The usual drivers' tests include those of visual acuity, and that is important. (Hearing, apparently, is not essential to driving ability.) Questions are asked at least regarding periods of unconsciousness, and conditions such as diabetes which may bring about such periods. There are, however, emotional factors which are extremely important—attention and its converse, distractibility, coördination, reaction time, for instance. The history of persons involved in accidents, too, shows that some persons are "accident-prone," a

*Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia.*

fact which suggests unconscious factors of a self-harming nature. At least some of the factors mentioned are susceptible of detection by certain tests; in Rio de Janeiro, for example, all bus drivers must pass a battery of psychologic tests in order to demonstrate their fitness. (Anyone who has seen the traffic there wonders at the low mortality!)

The Director of Traffic and Vehicles of the District of Columbia, Mr. George Keneipp, has long been keenly aware of the human factor, and it is gratifying to learn that a Traffic Clinic will be organized in the District soon (see editorial in February ANNALS). Such a forward-looking step should be helpful in lowering the number of driving risks on the streets of Washington.

W. O.

## PARADOXICALLY OURS

In the daily conversation of doctors, seldom is any term used more frequently than "my patients"—the basic material, as it were, on which our practices are built. But how many of us have considered what that possessive pronoun actually means? Possession implies belonging to, but obviously ownership in the literal sense is absurd. Does this possessiveness mean that the patient is required to follow the rules and procedures we may indicate? Obviously not, because the patient may reject our advice at his pleasure, though perchance at his peril. Does it mean that no one else may treat him? Perhaps—depending on a number of things. In an emergency, anyone may. If the patient keeps silent as to our previous attendance, no doctor can be blamed for attending him professionally; and, of course, at the patient's whim he may be our patient no longer on the briefest possible notice. Even the amount and type of examination permitted depend on his expressed or implied permission so long as he is of sufficiently sound mind to express it. Actually, the only obligation he has is to pay our fee for advice and treatment given, and even then it is up to us to justify this fee—truly, indeed, a buyer's market.

Contrariwise, what are our obligations? Unless constrained by service or contract we are at least not legally obligated to accept anyone as a patient. But once we have accepted a patient, we are required to furnish him the best that our skill and training and opportunity permit for as long as he may need it, unless and until he is discharged. Even this can be done only on adequate notice—allowing him time and opportunity to select another physician.

We are required to practice under the conditions imposed by law (license, reportable diseases, reportable gunshot wounds, suicidal or homicidal attempts, etc.). We must keep accurate records for the filing of numerous reports (taxes, etc.) as part of our office maintenance.

The problem of maintaining the inviolability of privileged communications needs no discussion; every one of us is indoctrinated with this necessity as well as with the possible consequences of failing to do so.

These are all direct obligations; there are many others that are implied. Where special skill is necessary there is usually the problem of selecting a proper consultant. Merely turning a patient over to another doctor does not free us of all responsibility. He should be selected for proper competency and the patient's need. He should be furnished with a sufficient case history and an opportunity to examine the patient and prescribe treatment. A sufficient time for the patient to respond to the treatment must also be allowed. Naturally, the selection of a consultant should not be too long delayed.

Our instructions and explanations to our patients should be sufficiently clear so as to be understood or, better still, so clear they cannot be misunderstood. Probably no requirement is unconsciously violated more than this. Phrases and procedures that are routine to us may be new and often startling to the patient. A drug to us means a remedy; to the patient it may suggest "dope." An incision may bring visions of complicated surgery. The unspoken fears of the patient may prevent him from properly listening to our discussion. A little time spent in bringing his fears to the surface is usually well rewarded by providing him with better insight into his illness. This is especially true prior to surgery or to procedures unfamiliar to the patient.

We occasionally forget that we are dealing with the sick and disturbed and so take umbrage at ill manners and emotional explosions. It most assuredly should be part of our training to endeavor to adjust to him and his problems (our living, remember!) rather than the reverse. This is most important when things go wrong, when emotion rather than logic takes over. Are all of us entirely free from *post hoc, ergo propter hoc* reasoning?

Also, we must be concerned with what the patient too often regards as the protection of the doctor from his mistakes. Of course, ethics is nothing of the sort. While it may prevent us from making a few mistakes, medical ethics is nothing but rules of conduct aimed at the protection of the patient first and last. The protection of the doctor is a by-product.

The necessity of one responsible doctor in charge is obvious. In any line of endeavor "too many cooks spoil the broth." It is manifestly impossible to have good medicine without the maintenance of a reciprocally trustful doctor–patient relationship. Therein lies the art of medicine, the need for which its rapidly growing handmaiden, science, does not have. Nothing replaces the personal interest of the doctor and his ability to convince his patient of this interest.

The family doctor through long contact and many examinations accumulates a personal knowledge of his patient's constitution, illnesses, emotional responses, allergies, drug idiosyncrasies, and limitations that no record sheet will ever supplant. No consultant or one acting in an emergency should fail to secure such information if available by telephone or through written communication.

On an emergency call, long-range radical changes in therapy or elective surgery should not be attempted without a report to, and the permission of, the doctor normally in charge. Occasionally one finds a condition apparently overlooked by the family doctor. The latter should be told rather than the patient. It may not have been overlooked, and it may not be what it seems. By a few words or even raised eyebrows a patient's confidence in his own doctor, that was really well merited, may be destroyed. Remember, fundamentally the patient is being protected, not your vanity or the other doctor's reputation, although occasionally this may also happen.

There are many more implied obligations, e.g., the necessity of keeping reasonably abreast of progress in medicine, and the willingness to impart the results of special tests and examinations to any qualified physician who may supplant you in the care of your former patient or who may temporarily be in such a position.

Especially the breach of two implied obligations causes much unnecessary work for the Grievance Committee as well as deterioration of patient-doctor relationships. One is explaining the necessity of involved examinations and elaborate accessory procedures before we make them, and the second, the concomitant expense.

What may mean a sprained back to a patient may suggest to us the possibility of malignancy. A little "sales talk" may convince the patient of the desirability of a thorough examination, including laboratory procedures. We must not forget, however, that often a few days' expectant treatment and waiting may solve the problem. The doctor who habitually makes too many unnecessary examinations is exploiting the patient. Before being involved in expense the patient should be assured that the procedures are needed and within his means. Remember that we are practicing in a buyer's market.

Then again there is the necessity of a report to

## HAVE YOU A QUESTION ABOUT MEDICAL SERVICE?

Perhaps no subject is more widely discussed among members of the Medical Society than Medical Service of the District of Columbia, Washington's Blue Shield Plan.

From reports, it is apparent that there is considerable misinformation and many unanswered questions about the Plan and how it operates. In the belief that there is an opportunity here to be of real service to many readers of the MEDICAL ANNALS, a new feature, "The MS Question Box," will be devoted to answering queries about Medical Service. It will first appear in the June issue.

Have you a question re MS? If so, send it to the Editor, MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 1718 M Street, N.W., Washington 6, D. C.

the patient. He feels he pays for an examination and is entitled to a report of some kind. A discussion of the results of our findings and recommended treatment is often enough, and, except with the unusual patient, need not be in great technical detail. The written report causes more difficulty. Often we suspect his motive, especially if we feel that he is shopping around. How much of a report he should get depends on many factors. We are all happier when the details can be forwarded directly to another doctor who will not misunderstand or misuse them. Obviously, a mentally deranged patient is not entitled to an elaborate report on his psychosis. Certainly to a patient who travels, a report on the results of his laboratory and X-ray examinations, as well as other pertinent findings, with a brief statement on treatment, may be a necessity.

It is amazing how often a very brief written report satisfies the patient. Stiff-necked refusal to give it may cause the loss of the patient as well as the fee involved. I cannot stress enough the necessity of good judgment as to what is to be written. Certainly mere suspicions should not be presented to the badly phobic patient. Even in writing to another doctor temperately expressed judgments may save us from future embarrassment. It is very difficult to prove accusations of bad faith or malingering.

The more we examine the matter the more we will be convinced that "our patients" mean our responsibilities as well as our opportunities for service. We may remind ourselves that service and servant come from the same root and feel that perhaps there is too much of the aura of the latter. Perhaps so, but there is dignity in labor, and proper humility is not unctiousness and need not involve loss of dignity.

Medical ethics can never be static. The formal consultation of the past, I am afraid, is already on its way out. Nevertheless, I owe a debt of gratitude to some of the magnificent clinicians of the past who in consultation and examination of the patient not only taught me much but who, with their splendid background in the humanities, impressed me with the fact that the solution of the immediate problem was only one consideration; that medical education consists of much more than accumulation of factual information—that it was in the Ciceronian sense a marshaling of all my inherent abilities to cope with my problems, not only in medicine but with people and therefore with life.

Medical ethics is but the etiquette of medicine and is in a state of flux. The American Medical Association is considering revision of its rules of conduct. The phraseology may change, but the spirit will not, because ethics concerns the good manners of medicine. Its primary object must remain the protection of the patient.

ALBERT E. MARLAND, SR., M.D.

# In and Out of Focus

BY THE OBSERVER

## *III. The Board of Censors*

Amendment XI, Section 2 of the Constitution and By-laws reads:

"There shall be elected at the Annual Meeting of the Society a Board of Censors, one of whom shall be elected for a term of three years, one for two years, and one for one year. At each Annual Meeting thereafter, there shall be elected one Censor for a term of three years. Applications for membership shall be made in writing on a form provided by the Society, endorsed by three Active members of the Society, none of whom shall be a member of the Board of Censors, and sent to the Secretary who shall present their names at a subsequent business meeting of the Society and send a list of their names to the members of the Society. All applications for membership shall be promptly delivered to the Board of Censors who shall inquire into the standing of each applicant. The Board of Censors shall notify the Society of the application and shall allow a period of two months within which the members of the Society may register their approval or disapproval with the Board of Censors. After the elapse of the said two months, the Board of Censors shall report in writing to the Executive Board, recommending the election of satisfactory applicants. The Executive Board, within thirty days, shall vote upon the election of each applicant and by a majority vote may elect the applicant to Active membership for a period of one year. After election, each applicant shall, within three months, sign an obligation to be governed by the Constitution and By-laws of this Society and pay the dues for the current calendar year. On the expiration of the one-year period of membership, the Executive Board shall report thereon to the Society and the Society may elect by a majority vote each one-year Active member to full membership in the Society."

The above amendment was adopted by the Society on December 12, 1945. As will be noted, it specifies the Board's duties and procedures which it must follow. However, as stated previously in this series, in connection with the duties of the President and the Executive Board, there is more to its assignment than the rule book states.

First of all, it should be pointed out that the Board of Censors is the only body, aside from the Executive Board, elected by, and directly responsible to, the Society itself. As stated above, its primary obligation is to screen applicants for membership, recommending to the Executive Board for election those who meet requirements.

In addition to the procedures specified in the amendment, the Board interviews each applicant prior to taking action on his application. These interviews are held in the Board Room at the Medical Society Building, where meetings usually begin at 10 o'clock in the morning and continue until noon or thereafter. If the number of applicants make it necessary, additional meetings are scheduled on successive days, or within the period of a week. This is not unusual, because for the past several years an unusually large number of physicians have applied for membership.

Each applicant is asked to appear at a specified time during the Board's sessions. He is seldom kept waiting because appointments are made with a view to expediting the business at hand. Upon arrival at the Society's building, the applicant is invited to the meeting, where he is introduced to Board members. Information contained in his application is read to the Board by the Secretary. If the applicant has served in the armed forces of the United States, he is asked to furnish a photostat of the document given him at the time of his discharge, indicating that he has served honorably. If he has the original with him, a photostat is made in the Society's Executive Offices while he waits. In either event, the photostat is placed in his membership folder, if he is elected to membership. The interview frequently concludes with questions by Board members about the applicant's training, practice, location, etc.

The personal interview was inaugurated many years ago by the Board of Censors. Succeeding Boards have followed this procedure, agreeing that there is no substitute for seeing the applicant in person. His attitude and his responses to questions may lead the Board to inquire further into his qualifications for membership. In a few instances this has brought to light facts about the applicant which made it inadvisable to recommend his election.

It need not be emphasized that it is vitally important the Board exercise the greatest care in screening applicants. It has done this conscientiously, as members who are familiar with the conduct of the Society know. That it is a time-consuming task is apparent from the following figures showing the number of applicants interviewed during the years 1946–1956:

1946–47 — 329
1947–48 — 176
1948–49 — 166
1949–50 — 136
1950–51 — 76
1951–52 — 105
1952–53 — 106
1953–54 — 128
1954–55 — 115
1955–56 — 136

1,473

When one considers that an interview requires from 5 to 15 minutes, it can be seen that serving on the Board of Censors is quite a chore. Some committees of the Society are called upon to do a great deal of work one year, and are more or less dormant the next. This has never been true of the Board of Censors. It is a working body—always has been—always will be!

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### *Deceased Physicians' Clinical Records*

One of the responsibilities falling to the lot of a physician's widow is the disposition of her late husband's clinical records. This is no problem if she can sell the practice. Otherwise, it may become a prolonged source of irritation and worry. In these circumstances she may well ask: Shall I destroy the records? If not, am I obligated to keep them indefinitely? Should I turn them over to the patients if they request it? Is there a moral or legal reason why I should be burdened with their responsibility, when, at best, it means only bother and expense for which I am not compensated?

Over the years, your Observer has received many similar queries from widows of physicians. Although he has acquired considerable information on the subject, he has frequently consulted counsel as to legal requirements before answering the questions put to him. On the basis of his knowledge and the information obtained, he has given the following advice:

It is not illegal to destroy patients' clinical records following the death of a physician. However, their importance to his patients should be taken into account, and, if it is not too burdensome, the widow should keep them for a reasonable length of time. Other physicians to whom the patients may go frequently find them of considerable value in making a diagnosis or prescribing treatment.

Clinical records should not be given to the patient but forwarded to the physician of the patient's choice. These records may contain information which may be misinterpreted or, for medical reasons, had better not be known to the patient.

Recent statutory changes providing for survivorship of tort claims against deceased persons make it not only advisable but prudent to retain clinical records until suits for malpractice cannot be instituted. This varies in the several states. In the District of Columbia it is 3 years. At the end of that time, patients who wish their records sent to another physician have had a reasonable opportunity to request that this be done.

Your Observer would be the first to admit that the situation on which this advice is based is not completely satisfactory, either to the physician's widow or to her late husband's patients. A physician, in active practice, might well consider the advisability of making provisions in his will for the disposition of his clinical records. For example, he could stipulate that, unless his practice is sold, these records should be entrusted to a colleague in whom he has confidence and who would be compensated for handling them. There are, undoubtedly, many physicians who, if they gave the matter thought, would not hesitate to obligate their estates for the expenses involved. If this were done, records might be made available to patients for an indefinite period. There have been instances where vitally important information about a patient was urgently needed many years after a physician's death.

Should readers of this column have any suggestions as to better methods of handling clinical records, they would not only be welcomed by your Observer but published in this column for the benefit of all.

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### *Why Partnerships Fail*

The number of requests for information about partnerships received at the Medical Society's Executive Offices has led to the conclusion that, in the District of Columbia at least, they are on the increase. If this assumption is correct, it is interesting to speculate on the reasons for it and the success which has attended these ventures.

Undoubtedly, the familiar arguments for this type of practice have proved attractive to a growing number of physicians. Among them are: an incentive to practice better medicine; less arduous hours because of division of work; opportunities for postgraduate studies; longer vacations; and financial returns equal to, if not exceeding, that of physicians in solo practice.

Not all partnerships have smooth sailing, for there is evidence that the mortality, while not large, is substantial. What are the primary factors contributing to their dissolution? Discussions which your Observer has had with a number of disillusioned physicians would indicate that there are two principal causes, incompatibility and misunderstanding.

Incompatibility receives the nod because it is the most common complaint when partners tell of their difficulties. What usually happens is this: In the first flush of enthusiasm for their joint venture, partners are so taken with each other and their bright prospects that they are oblivious to some of the hard realities of life. Not many months pass before the constant and close association begins to pall. They discover in each other shortcomings which were not apparent in the beginning. Unprepared to make allowances for them, they become impatient and critical. Disagreements become more frequent, with the inevitable result that continuation of the arrangement, entered into with so much enthusiasm, is out of the question.

This unhappy state of affairs, it seems, occurs more frequently in two-physician partnerships, especially where one of the partners is a young man and the other much older. Usually, the young man is called upon to carry what he considers more than his share of the burden without commensurate increase in income. When dissatisfaction becomes acute, parting of the ways is near at hand.

Whatever the circumstances which lead to irreparable differences, an effort is usually made to make the dissolution as painless as possible. However, at best, it is not a pleasant situation.

Your Observer has often been consulted by physicians in advance of their entering a partnership. When this happens, he takes full advantage of the opportunity to stress the importance of a trial period of at least six months or, better still, a year. During this time there will be ample opportunity for the partners to learn whether they are congenial and if, in the long pull, they will complement each other. If they find that the arrangement is not what was hoped for, their relationship can be terminated without hard feelings.

Physicians planning a partnership should realize that it is much like a marriage. In fact, partners often spend more time with each other than they do with their families. To become associated with an incompatible partner is, therefore, to invite what may be a costly and distressing experience.

Successful partnerships are built on sympapathetic understanding and consideration for the other fellow. In other words, only the emotionally mature will find a partnership arrangement to their liking. Certainly, so-called rugged individualists would do well to give partnerships a wide berth.

In the 1920's, your Observer was associated with a two-physician partnership which he considered a fine example of what such an arrangement should be. One of the partners was dominant, forceful and ambitious; the other was easy-going and ambitious to only a mild degree. While there were rough spots in their association, which lasted for some two decades, generally speaking, the partners got along well.

Compatibility, then, is of the utmost importance. Without it, a partnership will fail, or, at the very least, be an unhappy experience for all concerned.

Misunderstanding is, certainly, a close second as a contributing factor to the failure of a partnership. In their early enthusiasm, partners proceed without taking into account the fallibility of the human mind and the uncertainties of life. An apt illustration of this is an incident which occurred in Washington some years ago.

Late one day a highly agitated young physician came to your Observer's office. He said that his associate, a surgeon, with whom he had an oral agreement, had just died; that his widow refused to recognize the agreement and he was at a loss what to do. He was advised to come to an understanding with the widow immediately, paying what he had to for the practice before there were further complications. It seems that the young physician and his senior partner had agreed, at the beginning of the year in which the latter died, on a 50–50 partnership. It never occurred to them that fate would intervene and one of them would not live until a formal document, which they had promised each other, could be executed.

Many similar experiences have been reported in medical publications and it would appear unnecessary to comment further on the danger of relying upon oral agreements. A written agreement should be drawn by an attorney, preferably one with some experience in the medical field. The document should adequately protect all parties in the event of disability or death of a partner or the dissolution of the partnership. Only if such an instrument is carefully drawn and executed at the beginning of a partnership can the partners be assured that, if anything untoward happens, their interests and those of their families will be fully protected.

Incompatibility and misunderstanding, then, are the rocks on which partnerships have most frequently foundered. As has been pointed out, they can be avoided providing proper precautions are taken.

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### *Medicine's Future in Perspective*

The most common complaint among physicians is the pressure under which they are now carrying on their practices. The other evening one of them said: "I've had it! I'm completely worn out. I try to get away from the telephone, but if it isn't an emergency, it's another physician, and I can't refuse to answer. Patients, too, are difficult because life for them is pretty hectic. I would like to go on a vacation, but I just can't!"

One hears this complaint, nearly verbatim, daily. Your Observer is sympathetic because he too has acquired corns on his ears from marathon telephone conversations, and at times suffers from jangled nerves because of constant pressure. But what to do about it—that is the question. Somehow the brakes should be put on a society which is in such high gear. But that takes some doing, and there is no visible relief in sight.

In its broader aspects, what significance does this situation have for the medical profession?

As one thoughtful physician pointed out some weeks ago, this complete preoccupation with daily problems and responsibilities can prove disastrous. He says that it isn't enough that organized medicine meet issues as they arise. There should be within it a small body of vigorous, wise and experienced leaders with time for study and reflection who would anticipate changes which present trends indicate will occur. This body would, in effect, be a research group and would be adequately compensated to carry on its work. Their findings would provide the basis for sound action, which would undoubtedly lead to the adoption of policies far more acceptable to the public and the profession than in the past. Such mistakes as organized medicine has made might, under these circumstances, be avoided.

The American Medical Association might well consider this suggestion seriously. Radical changes in medical practice are imminent. It is not too late for long-range, informed, and thoughtful planning.

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***Advice to Authors*** In the early days of the typewriter, preparing a medical paper was a laborious task. Doctors couldn't get away with the unreadable scrawl of many of their present-day successors. Their manuscripts had, above all, to be legible. There were, of course, other requirements, many of which now seem dated.

With tongue in cheek, Dr. Charles H. Stowell, Editor of the *National Medical Review*, the Society's official publication in the late 90's, offered some interesting observations in the February, 1897 issue of his journal. From one of his exchanges, he had obtained what he called an editorial entitled, "How to Write for a Medical Journal." He said he was so impressed with its wisdom he decided subscribers to the journal should have an opportunity to read it.

The editorial consisted of the following directions for the guidance of would-be authors:

"1. Use none other than the upright system in writing.

2. Sit facing the table and have your feet rest on the floor or on some stool of convenient height.

3. Use an ink which is, 'A pale blue at first but quickly turns to a permanent black.'

4. Write strong, that is, use a stub pen, and bear down well.

5. Avoid profanity, and above all things do not repeatedly tell an untruth, that is, the same untruth.

6. It is not material what you say if you will only say it. Say it short and sharp. It is a good thing to make the reader believe you are a little mad.

7. Be sure and not write on both sides of the paper, for when a typewriter is used it is difficult to make out the meaning when the lines cross each other."

In the concluding paragraph Dr. Stowell wrote: "We will be pleased to receive communications of any length based upon the above, and we will give one month's subscription to this journal for the same, provided the author enclose ten cents to pay postage."

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***There is a limit!*** No physician in his right mind would constantly remind his patient that his slightest symptoms are to be taken seriously. He is well aware of the suggestibility of most people and that, if this course were relentlessly pursued, the result would undoubtedly be an anxiety neurosis.

However, it seems to us, that this is just what the press is doing to President Eisenhower when it reports even his most trivial indisposition. Literally, a Presidential sneeze reverberates in newspapers around the world. If the President becomes weary, and he as much as mentions it, it stirs up speculation about his health. Is he failing and what does it portend? At a loss for anything better, even his football knee is periodically resurrected, as it was during the recent Inauguration.

Small wonder then that the President becomes wary of making any comment about his health, except in answer to direct questions at his news conferences. Life is hard indeed when a man can't complain that he is tired or has an ache

(*Continued on page 160*)

# THE RESPONSIBILITIES OF THE MEDICAL PROFESSION IN THE USE OF X-RAYS AND OTHER IONIZING RADIATION*

The United Nations General Assembly, being aware of the problems in public health that are created by the development of atomic energy, established a Scientific Committee on the Effects of Atomic Radiation. This Committee has considered that one of its most urgent tasks was to collect as much information as possible on the amount of radiation to which man is exposed today and on the effects of this radiation. Since it has become evident that radiation due to diagnostic radiology and to radiotherapy constitutes a substantial proportion of the total radiation received by the human race, the Committee considers it desirable to draw attention to information that has been obtained on this subject.

Modern medicine has contributed to the control of many diseases and has substantially prolonged the span of human life. These results have depended in part on the use of radiation in the detection, diagnosis and treatment of disease. There are, however, few examples of scientific progress that are not attended by some disadvantages, however slight. It is desirable, therefore, to review objectively the possible present or future consequences of increased irradiation of populations which result from these medical applications of radiation.

It is now accepted that the irradiation of human beings, and particularly of their germinal tissues, has certain undesirable effects. Although many of the somatic effects of radiation may be reversible, germinal irradiation normally has an irreversible and therefore cumulative effect. Any irradiation of the germinal tissues, however slight, thus involves genetic damage which may be small but is nevertheless real. However, for somatic effects there may be thresholds for any irreversible effects, although if so these thresholds may well be low.

The information so far available indicates that the human race is subjected to natural radiation,† as well as to artificial radiation due to its medical applications, to atomic industry and its effluents, and to the radioactive fall-out from nuclear explosions. The Committee is aware of the potential hazards that such radiation involves, and it is collecting and examining information on these subjects.

The amount of radiation received by the population for medical purposes is now, in certain countries, the main source of artificial radiation and is probably about equal to that from all natural sources. Moreover, since it is given on medical advice, the medical profession exercises responsibility in its use.

The Committee appreciates fully the importance and value of the correct medical use of radiation, both in the diagnosis of a large number of conditions, in the treatment of many such diseases as cancer, in the early mass detection of conditions such as pulmonary tuberculosis, and in the extension of medical knowledge.

Moreover, it appreciates fully the contribution of the radiological profession, through the International Commission on Radiological Protection‡ in recommending maximum permissible levels of irradiation. As regards those whose occupation exposes them to radiation, the establishment of these levels depends on the view that there are doses which, according to present knowledge, do not cause any appreciable body injury in the irradiated individual; and also on the consideration that the number of people concerned is sufficiently small for the genetic repercussions upon the population as a whole to be slight. Whenever exposure of the whole population is involved, however, it is considered prudent to limit the dose of radiation received by germinal tissue from all artificial sources to an amount of the order of that received from the natural background radiation.

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* This statement was prepared and submitted for publication by the Scientific Committee on the Effects of Atomic Radiation, set up by the General Assembly of the United Nations at its Tenth Session.

† The radiation due to natural sources has been estimated to cause between 70 and 170 millirem of irradiation to the gonads per annum in most parts of certain countries in which it has been studied, although higher values are found locally in some areas. See the reports, "The Hazards to Man of Nuclear and Allied Radiations," published by the United Kingdom Medical Research Council in June 1956, in which also the millirem is defined; and from information submitted to the Committee.

‡ See the report of the International Commission on Radiological Protection (published in the *British Journal of Radiology*, Supp. 6, December 1954; in the *Journal français d'electro-radiologie*, No. 10, October 1955, and revised in 1956).

It appears most important therefore that medical irradiations of any form should be restricted to those which are of value and importance, either in investigation or in treatment, so that the irradiation of the population may be minimized without any impairment of the efficient medical use of radiation.

The Committee is consequently anxious to receive information through appropriate governmental channels as to the methods and the extent by which such economy in the medical use of radiation can be achieved, both by avoiding examinations which are not clearly indicated and by decreasing the exposure to radiation during examinations, particularly if the gonads, or the foetus during pregnancy, lie in the direct beam of radiation. It seeks, in particular, to obtain information as to the reduction in radiation of the population which might be achieved by improvements in instrument design, by fuller training of personnel, by local shielding of the gonads, by choosing appropriately between radiography and fluoroscopy, and by better administrative arrangements to avoid any necessary repetition of identical examinations.

The Committee also seeks the coöperation of the medical profession to make possible an estimate of the total radiation received by the germinal tissue of the population before and during the child-bearing age. It considers it to be essential that standardized methods of measurement, of types at present available, should be widely used to obtain this information, and it emphasizes the value of adequate records, maintained by those using radiation medically, by the dental profession, and by the responsible organizations in allowing such radiation exposure to be evaluated. The Committee is convinced that information of this type will make it possible to decrease the total medical irradiation of the population while preserving and increasing the true value of the medical uses of radiation.

## FUNDS AVAILABLE FOR TREATMENT OF MALIGNANCIES AT CHILDREN'S HOSPITAL

Children with cancer and leukemia under study and treatment at the Children's Hospital of the District of Columbia may now have all or part of the cost of their care defrayed through funds made available through several sources. Some of these funds are available for any patient with malignant disorders, and others are for those who participate in the research program directed by the hospital's pathologists. At the present time all patients with leukemia and many other malignant disorders may be included in the study program administered through the hospital's research program. Such patients are referred by their private physicians and continue to be followed by their private physicians in conjunction with those directing the study.

Cancer and leukemia are playing an increasingly important role in the diagnostic, therapeutic and research work of the staff at Children's Hospital. At present over 12 per cent of all deaths at the hospital are due to these diseases and nearly a thousand visits are made annually to its Tumor Clinic.

The hospital's Tumor Board, which was organized in 1949, reviews all patients referred to it for an opinion as to diagnosis or treatment. The Tumor Clinic, which is supported by funds from the American Cancer Society, is the only clinic in the Washington area where services are available only to children.

Financial aid for the hospitalization and care of patients, and for clinical research in cancer, has been made available from the Alexander and Margaret Stewart Fund and the Damon Runyon Fund for Cancer Research, Inc. The D. C. Cancer Aid Group, a lay volunteer organization, has been active in giving financial support to the Tumor Clinic for several years. Recently, additional funds for the purchase of drugs used in the treatment of malignant tumors and leukemia in the Tumor Clinic have been made available by the American Cancer Society under the Chemotherapeutic Service Plan. Additional financial aid for patients is being received in the form of memorials.

# On the Lighter Side

Dr. John A. Reed has a lighter side, but it is not the usual one found in most men of medicine.

Dr. Reed does not play tennis nor does he engage in the swift gyrations of handball. He is interested in sports to a degree, but does not go all out for any one sport. He is an average golfer, by his own admission, and has participated in a few tournaments and matched play at the Congressional Country Club. He earned his letter in basketball at Central High School, but never allowed himself the luxury of college basketball simply because he had to work while attending George Washington University.

When World War I called him to the colors, he joined the United States Marines and thereby interrupted his medical education. After the world was "made safe for democracy," he was honorably discharged from the service to resume his medical career; and he promptly began to earn his board and room by doing extern work at Garfield and Children's Hospitals.

In 1922 Dr. Reed had earned his M.D. degree and became an intern at George Washington University Hospital. Two years later, he was director of the dispensary at the same hospital, and was ready for the private practice of medicine. By means of the latter he was enabled to enroll for additional subjects at George Washington in order to secure the neglected A.B. degree. This degree he acquired in 1928, six years after receiving his medical degree.

Dr. John does not hunt, neither does he fish, but he does work—and has worked for the police and firemen of this city for the past 27 years. He has been Chairman of the Board of Police and Fire Surgeons of the District for the past 17 years, and is quite active in caring for the ills of the firefighters and the minions of the law. He also examines applicants for these positions, and he passes on the physical fitness of members who are eligible for promotion and/or retirement.

Dr. Reed does not bowl nor does he shoot pool, but he has a tremendous hobby and pride in his 80-year-old red brick house smack-in-the-middle of uptown Connecticut Avenue, northwest.

This home was built originally by a retired Admiral of the United States Navy, when the 1700 block of Connecticut Avenue was pleasant and uncongested countryside. When the Admiral passed on to his reward, the late Dr. William J. Mallory became its proud owner, and from him it descended to Dr. John Reed. It has been said of him, "One of his absorbing interests has been its [the house] decor, in which he retained the beauty of the past, yet embraced enough of the modern to attract." Now, then, you hardly ever see a house like that anymore! And what surprises me is that he lives alone and apparently likes it.

Chuckle note: Overheard on a bus: "You must have been up pretty late last night, Mrs. Jones. I saw your light on at 3 a.m." "Oh, I was just removing some spots from Irving's pants." "At that hour? Were they very big?" "Not very—just two tens and a five." . . . A career woman is a woman who goes out and earns a man's salary instead of staying home and taking it away from him. . . . Love is pretty much like eating mushrooms. By the time you find out whether it's good for you, it's too late. . . . Neurotic: A man who, when you ask him in the morning how he feels, tells you. . . . Girls don't look for too much nowadays—just a good man to spend with, the rest of their lives.

Nautical note: Words I never knew the meaning of until now: *Clinker-built.*—A type of hull construction in which the planks, or strakes, overlap each other. *Carvel planking.*—Smooth planking in which the strakes do not overlap. *Double ender.*—A boat in which both ends are pointed, like in a canoe. *Flush-decker.*—A boat in which the deck stretches from rail to rail, unbroken by trunk cabins. *Bilge.*—Ordinarily thought of as the interior bottom of the hull, but also referred to the turn of the hull just under the topsides. What did he say?

J. Earl Kadan, M.D.

# News and Personals

## MEETINGS—Past and Future

The Alexandria, Arlington, and Fairfax County Medical Societies extend a cordial invitation to all physicians in the Washington Metropolitan Area to attend the **Eighth Annual Northern Virginia Clinical Assembly** on Sunday, April 7, from 9:00 a.m., when registration opens, to 5:00 p.m. The meetings will be held in Wakefield High School, 4901 South Chesterfield Road, Arlington.

This year the program is being presented by members of the faculty of Duke University School of Medicine. Beginning at 10 a.m., the following papers will be presented:

"Epinephrin and Norepinephrin," Dr. Eugene A. Stead

"Dysmenorrhea—a Symptom, Not a Disease," Dr. Robert N. Creadick, Jr.

"The Surgical Treatment of Duodenal Ulcer," Dr. Keith S. Grimson

"Office Management of the Allergic Patient," Dr. Susan C. Dees

"The Treatment of External Otitis," Dr. Ralph A. Arnold

In the afternoon, there will be round table sections for informal discussion in several fields of medicine. These fields, with the special topic to be considered in each, are as follows:

General Medicine: "Low Fat Cookery," Mrs. Eugene A. Stead

Obstetrics: "Psychosomatic Gynecology," Dr. Robert N. Creadick, Jr.

Surgery: "Surgery of the Autonomic System," Dr. Keith S. Grimson

Pediatrics: "Pediatric Allergy," Dr. Susan C. Dees

Another afternoon feature will be a Grand Rounds presentation of a patient with heart disease complicated by pregnancy. The discussion will be led by Drs. Stead and Creadick.

The registration fee of $5.00 will include luncheon and a cocktail party following the scientific program. Wives will be admitted free for the lectures and cocktail party, but will be charged $3.00 for the luncheon. Checks for advance registration should be made out to the Northern Virginia Clinical Assembly and mailed to P.O. Box 192, Alexandria, Va. Dr. James M. Moss is Chairman of Arrangements for the Assembly.

Dr. H. M. Pollard, Secretary General of the American Gastroenterological Association, wishes to call attention to the **World Congress of Gastroenterology,** which will be held in Washington, D. C., May 25-31, 1958, at the Sheraton-Park Hotel. The major subjects to be considered at the scientific session will be: peptic ulcer, malabsorption and sprue-like syndromes, nutrition and its effect on the liver and pancreas, intestinal infection and infestation, and cancer of the stomach. Chairman of the meeting is Dr. Henry L. Bockus, of Philadelphia. Information regarding program, housing, etc., may be secured by writing to Dr. Pollard in care of University Hospital, Ann Arbor, Michigan.

**The Scientific Council of the Washington Heart Association** sponsored a meeting at George Washington University School of Medicine, February 13. The program was presented by the Cardiology Section of the Medical School, with Dr. Clayton B. Ethridge as moderator. The following papers were presented:

"Carotid Pulse Tracing in Diagnosis of Aortic Stenosis," Drs. John E. Smith, Irene Hsu, and John M. Evans

"Coarctation of the Aorta: a Patient Presenting Unusual Features," Drs. Irene Hsu, Owen Gwathmey, and John M. Evans

"Operative Results in Aneurysm of the Aorta," Dr. Owen Gwathmey

"Serum Transaminase—GOT—in Pulmonary Embolism and Pulmonary Infarction," Drs. Bernard Ostrow, Howard Ticktin, Benjamin Buteler, and John M. Evans

"The Clinical Implications of the EKG Pattern 'Bilateral Bundle Branch Block,'" Drs. G. A. Kelser, Jr., Benjamin Buteler, and Caesar Caceres

**The Section on Ophthalmology** held a dinner meeting, February 12, at the Kennedy-Warren. The guest speaker was Dr. Samuel D. McPherson, Jr., of Durham, North Carolina. He spoke on "Varied Technics for Cataract Surgery."

On February 7 the **Section on Neurology and Psychiatry** met in the Medical Society's Library. Two papers were presented: "Reading Epilepsy," Dr. Harold Stevens, and "Some Experiences with Chemopallidectomy," Dr. Harvey Ammerman. Discussion of the first paper was led by Dr. Cosimo Ajmone-Marsan.

**The Washington Psychiatric Society and the Medical Society of St. Elizabeths Hospital** held a joint meeting on February 22 in the Medical Society's auditorium. The topic for the program, "Newer Concepts in Hospital Therapy," was introduced by three speakers, Drs. David W. Harris, Arthur H. Kiracof and Francis N. Waldrop, all staff members of St. Elizabeths Hospital. Dr. Addison M. Duval and Dr. Lucy D. Ozarin led the general discussion which followed.

Guest speaker at the dinner meeting of the **Jacobi Medical Society,** February 18, was the Honorable Michael J. Mansfield, Senator from Montana, and a member of the Foreign Affairs Committee. The meeting was held at the Willard Hotel.

## GENERAL NEWS

**The Executive Board of the Medical Society of the District of Columbia** held a particularly long session at its first meeting of the year, January 28, 1957. The Board heard a report from Dr. Preston A. McLendon, who represented the Medical Society at a meeting of the AMA's Committee on Polio, held in Chicago, November 26. Dr. McLendon concluded his report on that meeting with the recommendation that a Committee on Poliomyelitis Prevention be created for the purpose of conducting a polio vaccination program in the Washington Metropolitan Area. The Board approved this proposal and voted that the committee be composed of 7 members of the Society and representatives from all civic and other interested groups in the community, and that in view of the urgency of the situation, the President, with the assistance of Dr. McLendon, be authorized to appoint the Society's representatives.

The Board confirmed the choice of chairmen of standing committees for the ANNUAL SCIENTIFIC ASSEMBLY submitted by Dr. James W. Watts, President-elect of the Society. They are:

Program: Dr. Thomas M. Peery
Scientific Exhibit: Dr. James E. Fitzgerald
Television and Motion Pictures: Dr. Gordon S. Letterman
Attendance: Dr. William O. Bailey, Jr.
Social Affairs: Dr. Edward E. Ferguson
Finance: Dr. Richard B. Castell

The need for the establishment of a review committee to function under the Medicare Program was discussed, and it was agreed that a 3-man committee, with the authority to call in any consultant that might be needed, would suffice. President Caulk submitted the names of Dr. Leo B. Gaffney, *Chairman*, Dr. William K. Billingsley, Jr., and Dr. Stafford W. Hawken as members of the **Review Committee for the Medicare Program.** These appointments were confirmed by the Board.

In line with the authority granted him at the December 4, 1956 meeting of the Board, President Caulk submitted for approval the following appointees to a special **Committee on Insurance** which will study available group life insurance plans with the view of recommending such a program to the Society: Dr. Philip H. Philbin, *Chairman*, Dr. Frederick B. Brandt, and Dr. Paul F. Jaquet.

Dr. Zigmond M. Lebensohn, Chairman of the Committee on Mental Health, and Dr. Earl H. Mitchell, Chairman of the Subcommittee on Alcoholism, recommended that the **Subcommittee on Alcoholism** be transferred from the jurisdiction of the Committee on Public Health to that of the Committee on Mental Health. This would follow the precedent set by the AMA; its Committee on Alcoholism functions under the supervision of the Council on Mental Health. The Board is in accord with this proposal and will submit it as a recommendation to the Society at the next business meeting.

The Secretary reported on the meeting of the Editorial Board of the MEDICAL ANNALS, which was held January 14. The Editorial Board voted to present to the Executive Board, for approval, the names of Dr. George E. Schreiner (internal medicine) to succeed Dr. Hugh H. Hussey, resigned, and Dr. I. Phillips Frohman (general practice) to succeed Dr. R. Lee Spire, resigned. The Board approved these choices.

In accord with another suggestion, originating at the meeting of the Editorial Board, the Executive Board approved the addition of "consulting editors" to the editorial staff of the ANNALS. The consulting editors would represent the various medical institutions in the Washington Metropolitan Area and would not necessarily be members of the Society. They would be selected from Federal and District hospitals and other medical institutions, from the three medical schools, and from private hospitals in the Metropolitan Area.

The American Medical Association is sponsoring a series of regional Medical-Legal Symposiums to be held during the month of March in Atlanta, Ga., Denver, Colo., and Philadelphia (March 29–30). Dr. Robert E. Moran, Chairman of the Committee on Professional Liability Insurance, was designated the Society's official representative to attend the meeting. The Board also voted that Mr. Warren E. Magee, the Society's legal counsel, be invited to attend the Symposium.

The Board recommended the reappointment of Dr. Howard P. Parker to succeed himself on the Board of Trustees of Group Hospitalization, Inc., for a term of 5 years.

Drs. Henry L. Darner, Edgar M. McPeak, and Ernest A. Gould were nominated by the Board to serve on the Board of Trustees of Medical Service for a 3-year term. Dr. Gould's appointment is a new one. Drs. Darner and McPeak were chosen to succeed themselves.

Dr. J. Ross Veal was appointed National Councilor for the Medical Society to the National Chamber of the U. S. Chamber of Commerce.

The Board took cognizance of a pair of forceps presented to the Society by Mrs. Prentiss Willson in behalf of Dr. Prentiss Willson, Sr. The gift was accepted with thanks and is now on display in the Society's trophy cabinet in the library. The forceps, which are nickel plated, with ebony handles, were originally given by Dr. Oliver Wendell Holmes, when he was Professor of Anatomy at Harvard Medical School, to his prosector in anatomy, Dr. Jonas Clark, on the occasion of the latter's graduation from Harvard in 1875.

April 7 has been designated **World Health Day.** Dr. Leroy E. Burney, Surgeon General of the Public Health Service, announces that the United States is joining with other nations in its observance. The theme this year is "Food and Health."

Further appointments to the staff of the new **Washington Hospital Center** have been announced. Dr. W. Dandridge Terrell, Jr., will head the combined Departments of Obstetrics and Gynecology.

Dr. Terrell will also be Chairman of the Department of Obstetrics, with Dr. Samuel M. Dodek as Vice Chairman, and Dr. S. Hazen Shea, Secretary.

Dr. Henry L. Darner was elected Chairman of the Department of Gynecology; Dr. J. Keith Cromer, Vice Chairman; and Dr. Albert S. Bright, Secretary.

Dr. Howard P. Parker will be Administrative Treasurer of the combined departments.

The elections were held at a dinner meeting at the Columbia Country Club, January 24, with 40 members of the staffs of Emergency and Garfield Memorial Hospitals present.

**Dr. Victor H. Haas, Director of the National Institute of Allergy and Infectious Diseases (PHS)** will be succeeded by **Dr. Justin M. Andrews** in April. Dr. Haas will return to laboratory research at that Institute in the field of microbiology. Dr. Andrews, a parasitologist, is well qualified for his new position through his work as chief staff official of the Bureau of State Services concerned with research and program development.

## PERSONALS

**Dr. Hugh H. Hussey,** Professor and Director of the Department of Medicine, Georgetown University School of Medicine, has been appointed to an 11-member National Advisory Committee on Public Health Traineeships to assist in a new public health training program voted by Congress at the last session.

The three-year training program, according to an official announcement from the Public Health Service, provides funds to enable physicians, nurses, engineers, and other professional health personnel to secure graduate or specialized training in public health. A total of 262 persons are already attending academic institutions with the funds provided for the first year of the program. Surgeon General Leroy E. Burney met with members of the committee recently to discuss plans and policies for awarding traineeships for the 1957–58 academic year.

**Rear Admiral Bartholomew W. Hogan,** Surgeon General of the Navy, was presented the Medal of Honor of the French Navy Medical Service in a special ceremony held in his office, January 10. Rear Admiral Louis Mornu, Naval Attaché for the French Embassy, made the presentation in official recognition for distinguished services in medicine rendered to the French Navy Medical Corps.

Admiral Hogan was guest lecturer at a meeting sponsored by the Yale University Department of Public Health, School of Medicine, and the Connecticut State Medical Society, in New Haven, January 24. He spoke on the "Economics of Medical Practice" in relation to military medicine.

**Dr. Elizabeth S. Kahler,** President-elect of the American Medical Women's Association, has been elected to the Board of Trustees of Wilson College in Chambersburg, Pa. Dr. Kahler is one of 10 women on the 25-member board and the only woman from the Washington area. She has been appointed a member of its building committee.

**Dr. Lawrence J. Thomas** has been chosen national Treasurer of the Phi Lambda Kappa medical fraternity.

Phi Lambda Kappa is celebrating its Golden Jubilee in 1957. It was founded at the University of Pennsylvania Medical School in 1907. Its 50th anniversary will be climaxed with a gala four-day convention at the Waldorf-Astoria in New York, December 28–31.

**Dr. Frederick J. Balsam,** who has served in the Veterans Administration Central Office as Chief of Program Development, Physical Medicine and Rehabilitation Service, Department of Medicine and Surgery, transferred, effective January 27, to the VA Hospital in Ann Arbor, Michigan, where he is now Chief of Physical Medicine and Rehabilitation Service. Dr. Balsam has also accepted a faculty appointment at the University of Michigan School of Medicine. He is an Associate member of the D. C. Medical Society.

**Dr. Merrill M. Cross,** of Silver Spring, Md., an Associate member of the D. C. Medical Society, has been installed as President of the Montgomery County Medical Society.

**Drs. W. Proctor Harvey and Charles A. Hufnagel** were guest speakers at a Symposium on Cardiology and Cardiac Surgery, presented by the Coastal Plain Heart Association, at Rocky Mount, North Carolina, February 7. Moderator of the symposium was Dr. Eugene A. Stead, Jr., Professor of Medicine, Duke University School of Medicine. Dr. Harvey, Assistant Professor of Medicine at Georgetown, presented a paper on "Indications for Surgery in Heart Disease, Congenital and Acquired." Dr. Hufnagel, who is Associate Professor of Surgery at Georgetown, gave a résumé of "Recent Advances in Cardiovascular Surgery" and a second paper on "Vascular Reconstruction."

**Dr. Julius S. Neviaser** gave an instructional course lecture, January 29, on "Injuries In and About the Shoulder Joint" at the Annual Meeting of the American Academy of Orthopedic Surgeons, held at the Palmer House, Chicago, January 26–31.

**Dr. I. Phillips Frohman** presented two papers at the Ninth Annual Meeting of the Oklahoma Chap-

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several months. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| January 16 | Dr. James A. Gannon | Treatment of Chronic Alcoholics | Counsellors |
| January 29 | Dr. J. Patrick Scanlon | The Psychology of Interpersonal Relationships | Orientation Session for Volunteers, United Community Services |
| January 29 | Dr. Julius Schreiber | The Emotionally Healthy Family | Chillum Temple Sisterhood |
| January 30 | Dr. William T. Gibb | Ulcers in Public Relations | Washington Chapter, American Public Relations Association |
| February 3 | Dr. Addison M. Duval | How Can We Identify the Pre-delinquent Child? | University of Life Series, Mount Vernon Place Methodist Church |
| February 5 | Dr. John U. Schwarzmann | Proctological Problems in Industry | Metropolitan Washington Industrial Nurses' Association |
| February 5 | Dr. Julius Schreiber | Emotional Needs of Children | Hyde School Parent-Teachers Association |
| February 12 | Dr. Charles E. Woodson | Diseases of the Liver | Practical Nurses' Association of D. C. |
| February 13 | Dr. Winfred Overholser | Recent Advances in Psychiatry | Sigma XI Chapter, Catholic University of America |
| February 20 | Dr. Julius Schreiber | Parent-Child Relationships | Parents Group, Buckingham (Va.) Nursery School |
| February 27 | Dr. John Harry King, Jr. | Sightsaving in Children and Adults | Anacostia Lions Club |
| February 27 | Dr. Edward J. Stieglitz | How to Grow Old and Like It | Society for the Advancement of Management |
| March 6 | Dr. Paula R. Kaiser | Anesthesia | WTOP-TV, Donna Douglas Program |
| March 13 | Dr. Christine Kehne | Older Woman with Young Man | WTOP-TV, Donna Douglas Program |
| March 20 | Dr. A. Genevieve McEldowney | Should a Woman Try to Change a Man? | WTOP-TV, Donna Douglas Program |

ter of the American Academy of General Practice, in Oklahoma City, February 4 and 5. The papers were entitled "Professional Writing" and "Are Physicians Educated?"

Dr. Frohman was recently reëlected President of the Mid-Atlantic Chapter of the American Medical Writers' Association. **Dr. Robert P. Odenwald** was reëlected Vice President.

**Dr. Samuel M. Dodek** presented an unusual exhibit at the Fifth Annual Clinical Meeting of the American College of Obstetricians and Gynecologists in Chicago, November 7–9. The exhibit was a collection of early textbooks in obstetrics and gynecology, some dating back to the Renaissance and others written during the 17th and 18th centuries.

Dr. Dodek, who is Associate Clinical Professor of

Obstetrics and Gynecology at George Washington University School of Medicine, took part in a Symposium on the Management of Pelvic Pain in Women during the meeting of the Mid-Atlantic Division Regional Meeting of the International College of Surgeons, held in White Sulphur Springs, West Virginia, February 10–13.

**Dr. Melvin G. Alper** gave a lecture on "Hereditary Diseases of the Eye" as part of a course in human genetics at the University of Pennsylvania School of Medicine in Philadelphia, December 3.

**Dr. Fred A. Moss** addressed a joint dinner meeting of the Women's Medical Society and the Women's Bar Association of D. C. at the Lafayette Hotel, February 5. His topic was "Investment Guidance for Professional Women." His daughter, Dr. Claudine Moss Gay, is President of the Women's Medical Society.

**Dr. Georges F. McCormick** was co-author of a paper on "The Influence of Pulmonary Capillary Blood Flow upon Alveolo-Capillary Gas Exchange," which was read at the Annual Meeting of the Southern Section of the American Federation for Clinical Research, in New Orleans, January 25. Dr. McCormick is an Associate member of the D. C. Medical Society. The other authors were Dr. Peter Luchsinger and Dr. Kenneth H. Moser, all members of the Department of Medicine, Georgetown University School of Medicine.

**Dr. Leslie H. French,** cardiologist at Prince Georges General Hospital, Cheverly, Md., was invited to conduct the annual course in Practical Electrocardiographic Analysis at White Cross Hospital in Columbus, Ohio, March 4–8.

Several members of the D. C. Medical Society took part in a Cancer Institute for Nurses held under the auspices of the District Division of the American Cancer Society, January 24. **Dr. Bruce I. Shnider,** of the Chemotherapy Service, National Cancer Institute, was moderator of a panel on various methods of cancer treatment. Among the panel participants were **Drs. Jeanne C. Bateman, Alvin C. Wyman, and Gerard J. Inguagiato.** Dr. Bateman is an Active, the others Associate members of the D. C. Medical Society.

## MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, January 28, 1957, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

### *Active Members*

Gerald L. Casebolt, 4621 Nichols Avenue, S.W.
Eugene A. Clark, Jr., 5220 Kansas Avenue, N.W.
Norman H. Horwitz, 1150 Connecticut Avenue, N.W.
Royce E. House, 2019 R Street, N.W.
Charles S. Ireland, 2634 Myrtle Avenue, N.E.
Philip R. James, 6921 Clarendon Road, Bethesda, Md.
Stanley J. Klyza, Washington Clinic
Sanford L. Leikin, D. C. General Hospital
William B. Reed, 7815 16th Street, N.W.
Maxine Schurter, 1801 Clydesdale Place, N.W.
James G. Shea, 2315 Branch Avenue, S.E.
David C. Wherry, 2650 Wisconsin Avenue, N.W.
Donald C. Wilansky, 3000 Connecticut Avenue, N.W.

### *Associate Members*

William C. Weintraub, 4105 51st Street, Bladensburg, Md.
Raymond O. West, 7625 Carroll Avenue, Takoma Park, Md.

## CORRESPONDENCE

WASHINGTON, D.C., January 29, 1957

SUBJECT: Examinations by Court Psychiatrist
District of Columbia Commission on Licensure
to Practice the Healing Art

ORDERED:

That upon consideration of the petition of the District of Columbia Commission on Licensure to Practice the Healing Art, it is hereby directed that the Court Psychiatrist, be and he is hereby authorized and directed to conduct the necessary examinations of any and all persons licensed under the Healing Arts Practice Act referred to him by the said Commission on Licensure for a determination as to the said person's present capacity with respect to his use of narcotics or alcohol, or as to his present mental condition with reference to his continuing to engage in the practice of the healing art, and to make a report of such examinations to the said Commission on Licensure.

By order of the Board of Commissioners, D. C.

G. M. THORNETT
*Secretary to the Board*
*of Commissioners*

BIRMINGHAM, ALABAMA, January 15, 1957

TO THE EDITOR:

I read with interest in my copy of *Newsweek* for January 7 what they had written under the title "Indigent Internists?" When I came to the office, I immediately looked up our copy of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA for December and read your editorial, "The Plight of the Internist." Knowing you for many years as it has been my privilege, I read all of this with much interest. It seems to me you presented this matter very splendidly in your editorial.

I was particularly interested because you did quote very briefly from the article by Dr. Paul de Kruif in *Reader's Digest* for September, giving a reference to that article. It was my privilege to sit in along with others at the headquarters of the American College of Physicians when Dr. de Kruif was getting material for that article. Dr. de Kruif has been a good friend of mine for many years, and I was invited to sit in on that conference.

And I also read with interest the account a little further over of your silver anniversary as editor of the MEDICAL ANNALS. I knew that you had been editor many years but did not realize that it had been that long. Time does march on.

And I want to thank you for the very splendid report that you gave in the December issue on our Washington meeting. I think all of us were very much pleased with that meeting and with the fine coöperation that we had from our members there. I was sorry that I did not get a chance to see you during the meeting and to have at least had a little visit with you.

With all good wishes for this New Year, I am,

Sincerely,

C. P. LORANZ
*Advisor and Professional Relations Counselor, Southern Medical Association*

## BOOK REVIEWS

**Clinical Examinations in Neurology.** Members of the Sections of Neurology and Section of Physiology, Mayo Clinic and Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Price, $7.50. Pp. 370, with 76 illustrations. Philadelphia: Saunders, 1956.

This authoritative and complete manual on "Clinical Examinations in Neurology" is an excellent and detailed book which covers all aspects of the neurologic investigation of the nervous system. The book was written by the members of the Sections of Neurology and Section of Physiology of the Mayo Clinic, and incorporates the work of 16 authors.

The book is divided into 17 chapters which start with the neurologic history and takes up each of the systems of the cranial nerves, the neuro-ophthalmic, the motor system, the reflexes, the sensory system, mental tests, language and motor speech, autonomic function; special chapters are devoted to problems of pain, electroencephalography, electromyography, biochemistry, and pharmacy as related to aid in neurologic diagnosis, and special examinations of the spinal fluid by the lumbar and cisternal puncture approach.

The book is obviously written for the staff at the Mayo Clinic to follow as a guide in their neurologic evaluation of their patients. It is written specifically for the Fellows to use as a guide, and to conform to a certain definite plan, which they have formulated as being the most efficient in evaluation of the patient and the recording of data. There are charts throughout the book to guide the student in an understanding of the mechanism of the system being investigated. The chapter on specific study of muscles, for instance, has detailed charts of all the muscles and their mode of action and their innervation. The tests to be performed are very often illustrated with a diagram.

The book contains, in addition to the charts in the text, an envelope on the back cover containing additional charts for the recording of the sensory examination on printed anatomic figures, and a detailed muscle chart of all muscles necessary for neurologic evaluation. One large chart incorporates space for recording the chronologic history, as well as pertinent data, such as name, sex, and so forth. Along the margin of this chart there is an inventory for checking symptoms commonly found in the neurologic patient, such as headache, convulsion, sensory disturbance, weakness, etc. It is the feeling of the reader that this chart perhaps could well have been drawn up in a more concise manner, so that the presenting complaint is outlined more specifically and the secondary complaints also recorded in a more complete form. This neurologic record form leaves the history entirely to the examiner. The chronologic story is explained in the first chapter of the book, and perhaps students who digest this thoroughly will be able to write a good neurologic history. But if the chart had specifically set down certain definite places for parts of the neurologic history, it would have been easier to find one aspect of the history without having to go through the entire chronologic story. Some of the other charts deserve criticism also in that they may not be complete enough for their purpose. For instance, the sensory chart contains very small figures, which make it extremely difficult to outline a small zone of sensory abnormality. The small compact size of the charts, however, make for easy filing.

Other parts of the survey were also brief, such as the investigation of headache and convulsive disorders, but it must be understood that the book is not a reference work, but merely a guide in the investigation of the problems that are seen currently in the neurologic patient. Some chapters represented very new material, and the explanation of the electroencephalogram was very concisely organized so that the neurologist or neurosurgeon is able to understand mechanisms of this test without being an expert on the procedure. This was also true of electromyography and the biochemical and pharmacologic tests, with a short paragraph on the action of each of these.

It is the reviewer's feeling that this book is an excellent one for an institution to adopt and follow, taking full advantage of the organization and the charts which accompany it. It would place the neurologic examination in a uniform order for the hospital records, and make it easy to train new members of the house staff in the neurologic investigation. It is an intermediate book on neurology, between that of a handbook and a reference work, and would have the advantages and disadvantages of each of these as far as the neurologist or neurosurgeon who has other works of this kind at his disposal. It would perhaps be difficult for someone who has set ways of proceeding with the neurologic investigation, by other outlines, to adapt himself to this one for his own specific problems. The principal value of this book, I think, is for use in an institution that would put the entire plan to work; in other words, the house staff follow the outline of examination, employ the charts that are recommended, and be able to instruct new members of the house staff as they come to the service in the routine of this method.

William T. Spence, M.D.

**Ciba Foundation Symposium on Paper Electrophoresis.** G. E. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H-W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $6.75. Pp. 224, with 74 illustrations. Boston: Little, 1956.

This book is a collection of papers which were the program of a Ciba Foundation Symposium on the technic and use of paper electrophoresis. This meeting was held in England in July, 1955. The subjects of the papers on technic deal with general method, physiochemical aspects and relation to design of apparatus, effect of evaporation and effusion, interpretation of paper strips, and high voltage electrophoresis. The subject material in regard to usage deals with evaluation of albumin and globulin, human hemoglobin, protein dye reactions, lipo-proteins, and protein-bound serum, polysaccharides, and a paper on differential diagnosis of canine diseases.

Each paper provides an excellent review of the available knowledge on the subject chosen. The authors are European, British, American, and Canadian workers and, therefore, the material summarizes the knowledge of two continents. A very delightful and informative section of questions and answers by the group has been added to most of the papers. For instance, following the chapter on evaluation of albumin globulin ratio, there is a most excellent discussion of various dyes and problems in their use. The papers are adequately illustrated with photographs, charts and illustrations, the reproduction of which is only average.

Everyone who has some experience with paper electrophoresis will find this book valuable and interesting and would profit by adding it to his library. This book is not suitable for those who desire to begin working with paper electrophoresis, but who have no prior knowledge or experience in the field. They would do better to obtain other sources for the introductory phases of this subject.

Kenneth L. McCoy, M.D.

**Ciba Foundation Symposium on Bone Structure and Metabolism.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $8.00. Pp. 299, with 121 illustrations. Boston: Little, 1956.

The papers presented in this volume were read at the Ciba Symposium on Bone Structure and Bone Metabolism in London in July, 1955. The participants in this Symposium consisted of men of varying interests.

The papers cover the field of bone structure, bone metabolism, and finally, the clinical significance of variations in bone metabolism. The microscopic studies are augmented by autoradiography, microradiography, and the use of radioisotopes.

The papers are intensely and enthusiastically discussed by the participants of the Symposium and their guests and in many instances the discussions are as enlightening as the formal presentations.

This book can be highly recommended to all workers in the field of bone dynamics whether they be clinicians or physicians engaged in basic research problems.

John P. Adams, M.D.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**Clinical Use of Radioisotopes.** WILLIAM H. BEIERWALTES, M.D., Associate Professor of Internal Medicine and Coördinator, Clinical Radioisotope Unit, University Hospital, Ann Arbor; PHILIP C. JOHNSON, M.D., Assistant Professor of Internal Medicine and Chief, Radioisotope Unit, Veterans Administration Hospital, University of Oklahoma Medical School, Oklahoma City; AND ARTHUR J. SOLARI, B.S., M.S. (Physics), Instructor in Radiation Physics, Department of Radiology, Radiation Physicist for Clinical Radioisotope Unit and Kresge Research Isotope Unit, University Hospital, Ann Arbor. Price, $11.50. Pp. 456, with 126 illustrations. Philadelphia: Saunders, 1957.

**The Physician-Writer's Book ... Tricks of the Trade of Medical Writing.** RICHARD M. HEWITT, A.M., M.D., Senior Consultant, Section of Publications, the Mayo Clinic; Associate Professor of Medical Literature, the Mayo Foundation, Graduate School, University of Minnesota. Price, $9.00. Pp. 415, with 37 illustrations. Philadelphia: Saunders, 1957.

**Practical Diagnosis and Treatment of Liver Disease.** CARROLL MOTON LEEVY, M.D., Director of Clinical Investigation, Director of the Outpatient Department and Attending Physician, Jersey City Medical Center, Jersey City, N. J.; Consultant in Medicine, U. S. Naval Hospital, St. Albans, N. Y. Foreword by Franklin M. Hanger, M.D., Professor of Medicine, College of Physicians and Surgeons, Columbia University, New York, N. Y. Illustrations by Felix Traugott. Price, $8.50. Pp. 336, with 84 illustrations, including 23 in full color. New York: Hoeber, 1957.

**Pediatric Cardiology.** ALEXANDER S. NADAS, M.D., F.A.A.P., Assistant Clinical Professor of Pediatrics, Harvard Medical School; Cardiologist, The Children's Hospital; Physician, Sharon Cardiovascular Unit, Children's Medical Center, Boston. Price, $12.00 Pp. 587, with 343 illustrations. Philadelphia: Saunders, 1957.

**Notes on Atomic Energy for Medical Officers.** An introduction to the subject for Service and other Medical Officers who may be concerned with defence against atomic bombs and similar problems. By the Royal Naval Medical School, Alverstoke, Hampshire, England. Price, $4.75. Pp. 169, and 12 plates. New York: Philos. Libr., 1956.

## J. RUSSELL VERBRYCKE, JR., M.D., F.A.C.P.

### (1885–1957)

Dr. J. Russell Verbrycke, Jr., well known gastroenterologist, died, February 5, 1957, in his offices at the Parkwood Medical Building.

Dr. Verbrycke was a resident of Washington since 1894. Born in Preakness, New Jersey, June 12, 1885, he was the only son of the Reverend J. Russell Verbrycke, a Washington clergyman for many years, and Elizabeth Easton Verbrycke. The first generation of his family came from Holland about 1676.

Dr. Verbrycke attended Central High School and graduated in medicine from Georgetown University in 1906 at the age of 21. He interned at Children's Hospital for a year and also for a year at Garfield Memorial Hospital. He was a resident physician at Mt. Sinai Hospital in New York from 1907 to 1908.

Dr. Verbrycke was consultant in gastroenterology to Garfield Hospital from 1924 until his death. Earlier he had been instructor in gastroenterology at Georgetown and attending gastroenterologist at Gallinger (now D. C. General) Hospital. Later he served on the faculty of Georgetown as Associate Clinical Professor of Gastroenterology. He shared offices for many years with Dr. Henry C. Macatee, internist, in the Farragut Medical Building and later in the Parkwood Medical Building.

During World War I, Dr. Verbrycke was Associate Medical Director of the Potomac Division of the American Red Cross. During World War II, he was leader of the Garfield Hospital Medical Defense Unit and was appointed to the National Faculty of Wartime Graduate Medical Meetings.

Dr. Verbrycke became a member of the Medical Association of the District of Columbia, which later merged with the D. C. Medical Society, in 1907, and a Life member of the latter in 1948. He was a Fellow of the American College of Physicians and a member of the American Medical Association, American Gastroenterological Association, and the Southern Gastroenterological Association. He was a Councilor of the Southern Medical Association from 1923 to 1929. He was an honorary member of the Tri-County Society of Virginia, Past President of the Georgetown Clinical Society, and a member of the Hippocrates-Galen Society. He was the author of more than 50 papers in his specialty.

A golf enthusiast in his earlier years, he turned with equal enthusiasm to sailboat racing in later years. At the time of his death, he was a member of the West River Sailing Club, the Chesapeake Bay Racing Association, and the Sherwood Forest Club. He was a member of the Cosmos Club, the Mineralogical Society of the District of Columbia, and the Bethesda Country Club.

Surviving him are his wife, Mrs. Sophie Barnes Verbrycke, of the home address, 5311 38th Street, N.W.; a daughter, Mrs. Helen Verbrycke Morgan, of Alexandria, Va.; and two sons, Commander J. Russell Verbrycke III, Washington, and Robert B. Verbrycke, Kensington, Md.

## ELOISE BLAINE CRAM, B.S., M.S., PH.D.

### (1896–1957)

Dr. Eloise Blaine Cram, who retired last October from the National Institutes of Health after 35 years of Government service, died, February 9, 1957, at the home of her sister in San Diego, California, while on a visit. She maintained her own residence at 6624 River Road, Bethesda, Md.

Dr. Cram was born in Davenport, Iowa, June 11, 1896, the daughter of Ralph W. and Mabel Cram. Her father was a newspaper editor and publisher. She received the degrees of Bachelor of Science and Master of Science from the University of Chicago in 1918 and 1923, respectively, and a Ph.D. in medical zoölogy from George Washington University in 1925.

Dr. Cram was an internationally recognized authority on helminthic diseases and the author of more than 160 scientific papers and monographs. She first entered Federal service as a zoölogist with the Department of Agriculture. Most of her Government career, however, was with the Laboratory of Tropical Diseases at the National Institute of Allergy and Infectious Diseases.

During her employment with the Agriculture Department, she was recognized as a world authority on parasites of poultry, and represented the United States at several foreign conferences. After her transfer to the Public Health Service, she began studies on oxyuriasis and made a significant contribution to knowledge concerning the treatment and control of this parasitic disease. Her outstanding contribution was toward an understanding of schistosomiasis, an important health problem in tropical areas.

Dr. Cram served as President of the American Society of Parasitologists and was an officer or member of a number of other scientific groups, including the Society for Tropical Medicine, the Society for Experimental Biology and Medicine, and the Helminthological Society of Washington. She was elected to Associate membership in the Medical Society of the District of Columbia in 1937 and resigned in October when she retired from Government service.

Surviving her are two sisters, Mrs. Miles Max Miller, of San Diego, in whose home she died, and Mrs. Margaret C. Sieman, of Bemet, California.

**Cysts of Liver—White, White, Jr. and Beaven**

*(Continued from page 118)*

No clinical clues are furnished by the previous history, no pathognomonic signs or symptoms suggest a diagnosis, and functional tests shed no light on the condition. An epigastric tumor is always intriguing, and the nature of the enlargement of the liver may be self-evident or obscure.

One must not forget the possibility of a solitary cyst. There are a few signs of value: It is smooth, rarely tender, slightly movable and under low tension. Roentgenologic examinations offer a not infallible conclusion. The colon is displaced toward the left. There is one diagnostic method which has not been mentioned in the literature but probably has been used, needle biopsy. The chemical analysis and cytologic examination of the fluid would not be distinctive in a cyst of the liver but by its very negative nature would help narrow the diagnosis.

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### Congenital Cataracts—O'Neill

*(Continued from page 131)*

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### Lavoisier—Foster

*(Continued from page 136)*

been said that I feel almost as if it were an injustice to try to compress an account of his life and achievements into such small space. But no injustice can harm him now; his place is too well established, and beside his name in the book of history, written in letters nothing can erase, is the word IMMORTAL.

15 East Monroe Street
Phoenix, Arizona

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### There is a limit!—Observer

*(Continued from page 146)*

or a pain somewhere without there being much ado about it in the press.

Now, there is good reason for newspapers to keep close tab on the President's health, considering his medical history. Beyond a certain point, however, the whole business becomes ridiculous. The lengths to which some newspapers have gone in recent months to keep the public enlightened about his health is enough to make the President a hypochondriac. Happily, he apparently is not the type of individual who will become one.

T. W.

MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI *April*, 1957 NUMBER 4

# EVALUATION OF A BATTERY OF THYROID FUNCTION STUDIES*†

LT. CHARLES R. HENKELMANN, M.C., U.S.N.R.‡
LT. THEODORE G. BALBUS, M.C., U.S.N.R.§
CAPTAIN E. RICHARD KING, M.C., U.S.N.
*National Naval Medical Center*

*With the technical assistance of:*
J. N. ROBERSON, JR., HM1, U.S.N.
N. KONWINSKI, HM1, U.S.N.
B. L. SHULZ, HM1, U.S.N.
H. W. LENNOX, HM1, U.S.N.
W. M. BECKNER, HM2, U.S.N.

THE PHYSIOLOGIC STUDIES of Hertz, Roberts, and Evans[1] and the work of Hamilton[2] in 1938 marked the beginning of radioiodine use in the diagnosis of thyroid disorders. Since then the use of radioiodine has evolved into a routine procedure not only in the larger hospitals in this country but in many private offices.

From the published figures of the United States Atomic Energy Commission[3] there have been over 23,000 shipments of radioiodine to more than 3,400 users, involving more than 2,500 curies of iodine$^{131}$ in the period August 2, 1946 to December 31, 1954. More than 2,400 institutions were using radioiodine by the end of 1954.

Since the establishment of the Radioisotope Laboratory at the U.S. Naval Hospital, Bethesda, Maryland, in October 1948 there have been over 2,500 $I^{131}$ thyroid studies performed through the period ending October 1956. Currently the laboratory performs approximately 50 radioiodine batteries per month.

This report is concerned with the variable results inherent in procedures used in thyroid function evaluation. We wish to point out the advantage of a battery of parameters, as opposed to a single determination. In the voluminous reported material it is difficult to find precise agreement as to the most reliable tests and technics. Variation of the range of normal values, of laboratory procedure, and of interpretation of results causes the clinician unfamiliar with the radioisotope method to view the program of radioiodine usage with some mistrust. Human physiology, especially thyroid physiology, has wide ramifications and variation. Precise measurement of many of the components in this system awaits further developments. At present the problem appears analogous to the diagnosis of cardiac disorders where it is apparent that a battery of determinations, i.e., history, physical examination, electrocardiogram, X-ray exposures, and cardiac catheterization, are often necessary to establish the diagnosis. Such is the case in many types of thyroid disorder.

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*These studies were conducted at the Radioisotope Laboratory, United States Naval Hospital, and Radioisotope School, United States Naval Medical School, National Naval Medical Center, Bethesda, Maryland.

The opinions or assertions contained herein are the private ones of the writers and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service at large.

†Delivered at the District of Columbia-Maryland Eighth Annual Regional Meeting of the American College of Physicians in Washington, D. C., January 12, 1957.

‡ Now in private practice at Bakersfield, California.

§ Presently attached to the U. S. Naval Hospital, Oakland, California.

It is not the purpose of this paper to elaborate on the technical aspects of radioiodine procedure. Suffice it to say that variations of technics and results among different laboratories are a reflection on equipment design and individual approach to the problem rather than on the validity of the radioisotopic method.

In the recent literature a serious effort has been made to evaluate the various function studies performed with radioiodine. There has been an adequate time interval and a wealth of material to allow assessment of the various tests with assignment of the proper value to each. Explanations for contradictory values in specific cases have been advanced.[4] However, there remains a small number of cases which continue to overlap the established ranges for 1 or more of the studies now being used. Werner and his co-workers[5] have suggested the use of a battery of thyroid tests to improve the degree of accuracy. They think that an approach to 95 per cent accuracy of laboratory diagnosis might be achieved.

## METHODS

Our material consists of over 400 cases. These patients were referred to the Radioisotope Laboratory for evaluation of thyroid function. Adequate clinical appraisal had been done prior to referral. The procedure involved interview of the patient with attention to the thyroid gland and its physiology and a limited physical examination. The patient then received the tracer dose of 40 $\mu$c of $I^{131}$ on a fasting stomach. Twenty-four hours later the patient returned for the battery of studies consisting of 24-hour uptake, $PBI^{131}$ conversion ratio, saliva-$PBI^{131}$ ratio, and chemical PBI. Final laboratory diagnosis was made after review of the results of the 4 parameters correlated with the impression gained by the examiner at the time of the first interview in the laboratory. The clinical diagnosis and the laboratory diagnosis were then compared.

*Twenty-four hour uptake.* With the patient seated, the scintillation probe was adjusted in front of the neck and suitable counting performed. The standard, representing an amount of radioiodine equal to the ingested dose, was similarly positioned before the probe and counted. The 2 resulting counts were equated and the result expressed as the activity within the thyroid gland representing a per cent of the ingested dose.

$$\frac{\text{corrected counts per minute Patient}}{\text{corrected counts per minute Standard}} \times 100 = \%\ \text{uptake in 24 hrs.}$$

We do not use the neck phantom in counting the standard. A series of 100 patients had uptake studies performed with and without the neck phantom. Comparison of the results failed to reveal differences in the 2 methods which were statistically significant. We think the additional time necessary to use the neck phantom is not justified.

The 24-hour $I^{131}$ uptake needs little elaboration. It is a measure of the thyroid gland's ability to trap iodide from the circulating iodide pool in the blood plasma. In this laboratory 15 to 45 per cent uptake of the ingested dose is considered the range for the euthyroid state.

*Protein-bound iodine*$^{131}$ *conversion ratio.* A sample of venous blood was obtained immediately following the uptake procedure. The blood was allowed to clot, the sample centrifuged, and the serum decanted. An aliquot of serum was counted in the well-type scintillation counter. The serum protein was then precipitated by the zinc sulfate method,[6] washed, and similarly assayed. The result was expressed as a ratio of $I^{131}$ in the protein fraction to the $I^{131}$ in the total serum sample:

$$\frac{\text{corrected counts per minute protein fraction}}{\text{corrected counts per minute serum } I^{131}} \times 100 = \% \ I^{131} \text{ converted or, } PBI^{131} \text{ conversion ratio}$$

The protein-bound iodine$^{131}$ conversion ratio mirrors the ability of the thyroid gland to convert the trapped iodide to the organic protein complex and to release it into the blood stream as the thyroxin complex. Values of 10 to 50 per cent are considered within the range of the euthyroid state.

*Saliva-PBI$^{131}$ ratio.* A 3 ml. aliquot of saliva was collected by free flow at the time of uptake determination. This sample was assayed at the time of serum protein assay. The resulting count of $I^{131}$ activity in the saliva was expressed as a ratio to the precipitated protein $I^{131}$ activity:

$$\frac{\text{corrected counts per minute saliva } I^{131}}{\text{corrected counts per minute } PBI^{131}} = \text{saliva-}PBI^{131} \text{ ratio}$$

Since the salivary glands secrete iodide and quantitatively the amount secreted is in the inverse proportion to the amount trapped by the thyroid gland for conversion to thyroid hormone, the development of a ratio between the iodine$^{131}$ in the saliva and the iodine$^{131}$ in the serum protein has been rewarding as a test of thyroid function. The saliva-PBI$^{131}$ ratio in the euthyroid state is between 50 and 299 in this laboratory.

*Chemical PBI.* A sample of venous blood obtained at the time of venipuncture was sent to the chemistry laboratory of this hospital for determination of the total protein-bound iodine by the Barker method.[7] Chemical assay of the protein-bound iodine in the serum by the Barker technic determines the total amount of iodine, both radioactive and stable, present per unit amount of serum. This is expressed in the euthyroid state as 3.0 to 7.0 μgm. per cent in our laboratory. It is well known that this procedure is difficult and delicate. Table 1 presents the normal values of the 4 procedures used as a diagnosis of euthyroidism in this laboratory.

TABLE 1

*Thyroid Function Studies—Normal Values for Euthyroid State*

| | |
|---|---|
| Chemical PBI | 3.0–7.0 μgm.% |
| 24-hour $I^{131}$ Uptake | 15–45% |
| PBI Conversion Ratio | 10–50 |
| Saliva-PBI Ratio | 50–299 |

## RESULTS

The results in this series have correlated with the clinical diagnosis. Chart 1 reveals the overall

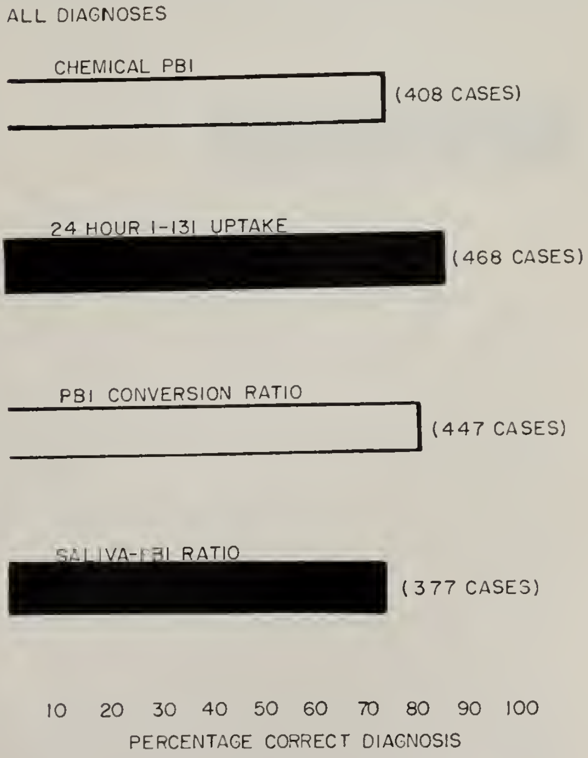


CHART 1. Percentage accuracy of 4 laboratory determinations in comparison with final clinical diagnosis.

per cent correct diagnosis for each procedure when compared with the clinical diagnosis. Superficially, it would appear that the 24-hour uptake is the most accurate examination if only 1 parameter of thyroid function is to be employed. PBI$^{131}$-conversion ratio is favorably placed also. However, the accuracy of individual determinations varies when the material is divided into the clinical diagnosis of euthyroid state, hyperthyroidism and hypothyroidism.

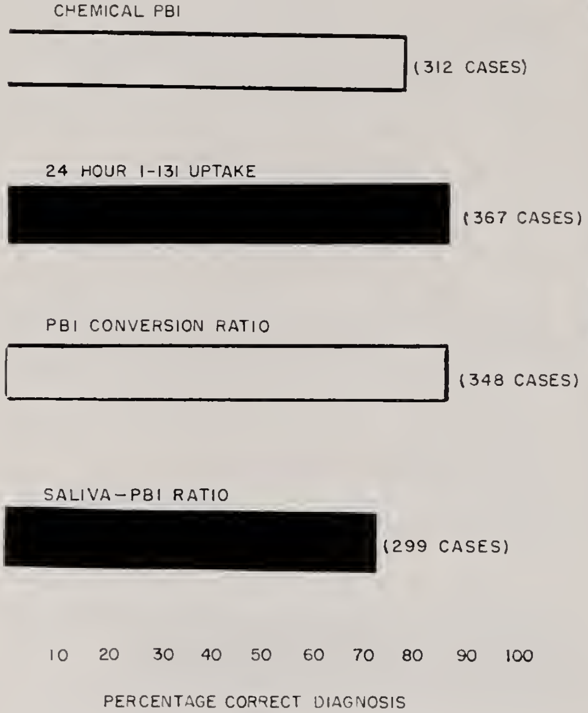


CHART 2. When the final clinical diagnosis is euthyroidism the 4 determinations have the above degree of accuracy.

Chart 2 indicates the accuracy of the determinations in the preponderant group of euthyroid cases. The 24-hour uptake or the PBI$^{131}$-conversion ratio has a high degree of accuracy in this category. Chemical PBI maintains its position. Only the saliva-PBI$^{131}$ ratio declines in degree of correctness.

The performance of the battery of studies in hyperthyroid patients is noted in chart 3, which demonstrates the change in accuracy of the tests. The PBI$^{131}$-conversion ratio and the saliva-PBI$^{131}$ ratio are significantly more accurate than the remaining 2 studies. The 24-hour uptake fails to diagnose accurately more than two-thirds of the cases due to values which are too low.

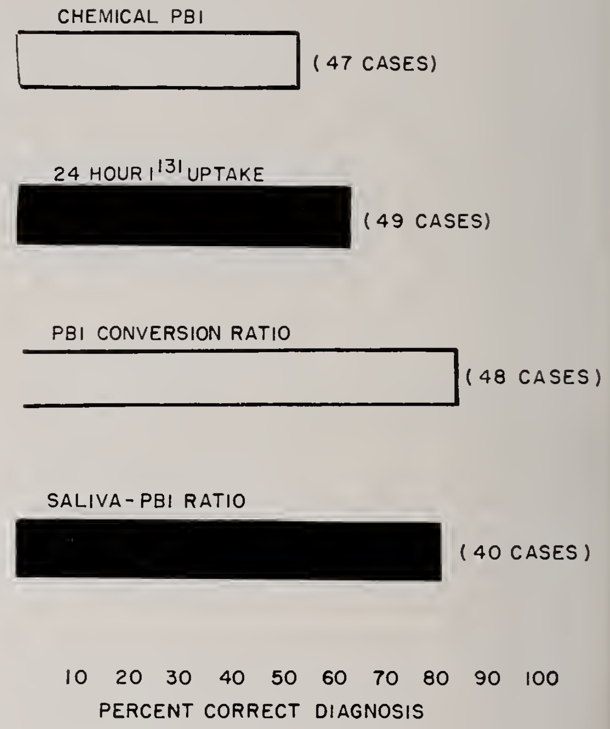


CHART 3. Hyperthyroid state is correctly diagnosed by each procedure in the above percentages. Note similarity of accuracy for PBI$^{131}$ conversion ratio and saliva-PBI$^{131}$ ratio.

Chart 4, concerning the diagnosis of hypothyroidism, yields a surprising aspect to this analysis. Saliva-PBI$^{131}$ ratio, 79 per cent accurate, is the best parameter for the confirmation of hypothyroidism. Of the other tests, only the 24-hour uptake correctly indicates this condition in more than 50 per cent of the patients.

## DISCUSSION

It has been shown that 1 determination in all of the thyroid function states will not suffice. Proper consideration should be made as to the relative accuracy of each determination with respect to the clinical condition under study. When the results of the 4 determinations are evaluated as to a final laboratory diagnosis, an appreciation of their accuracy is warranted.

In the future the laboratory opinion will be expressed in light of these findings in the hope that the improved correlation with the clinical picture and other laboratory procedures (basal metabolic rate, serum cholesterol, etc.) will result in an approach to 100 per cent accuracy in diagnosis.

As has been indicated, a significant error will result if the value of 1 test is used as the basis of diagnosis, and 2 of the determinations can hardly be expected to improve the degree of accuracy. Scattergrams 1 to 4 relate 2 of the determinations in various combinations in the diagnosis of hypothyroidism and hyperthyroidism. The vertical and horizontal lines drawn on each graph represent the upper or lower limit for a diagnosis of the clinical state present. An intelligent evaluation cannot be made if 1 or both of the parameters lie outside the normal range for diagnosis of the condition. Making the diagnosis on the basis of the weighted value of each procedure might improve the chance of correct diagnosis.

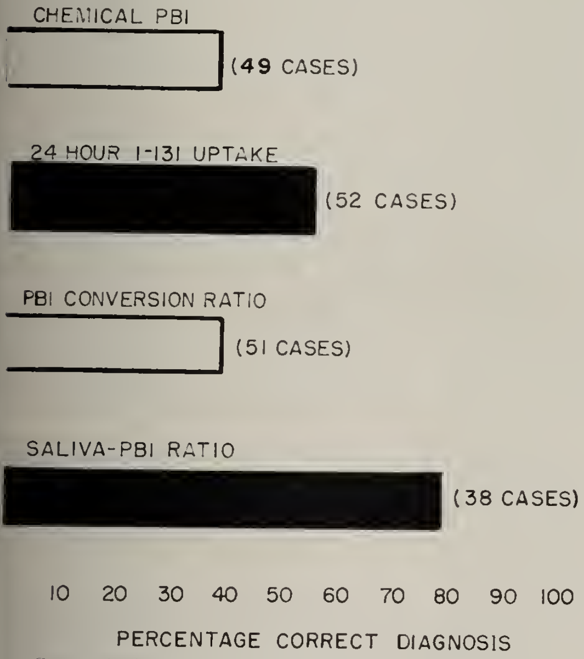
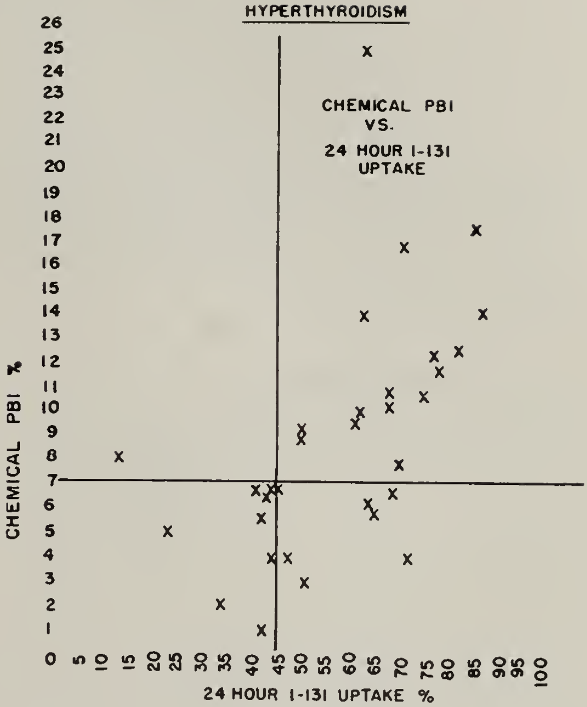
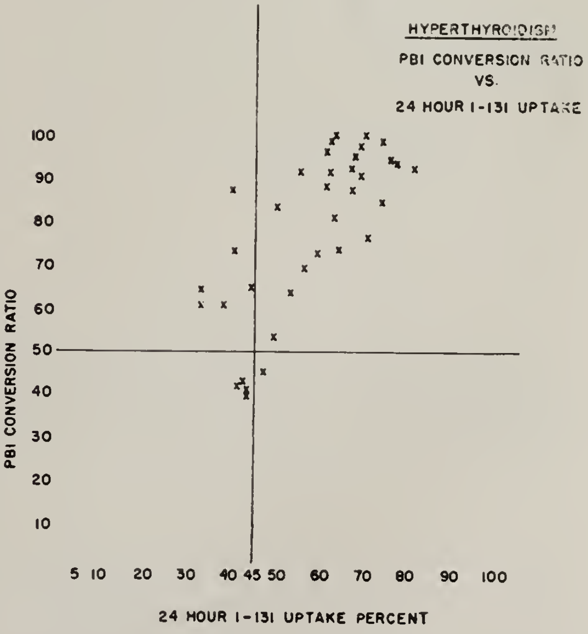


CHART 4. Accuracy of each procedure when clinical diagnosis was hypothyroidism. Note superior degree of accuracy of saliva-PBI$^{131}$ ratio.

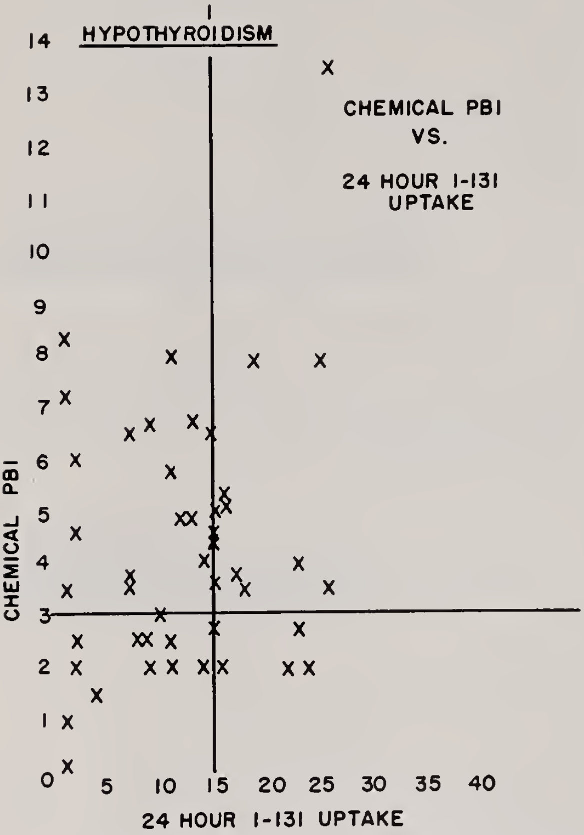


SCATTERGRAM 1. Chemical PBI plotted against 24-hour I$^{131}$ uptake percentage in 32 cases of hyperthyroidism. All x marks should lie to right of vertical line and above horizontal line. One-half of the marks are outside these limits.



SCATTERGRAM 2. PBI$^{131}$ conversion ratio plotted against 24-hour I$^{131}$ uptake percentage in 36 cases of hyperthyroidism. All x marks should lie to right of vertical line and above horizontal line. Eleven of the marks are not in the proper limits.

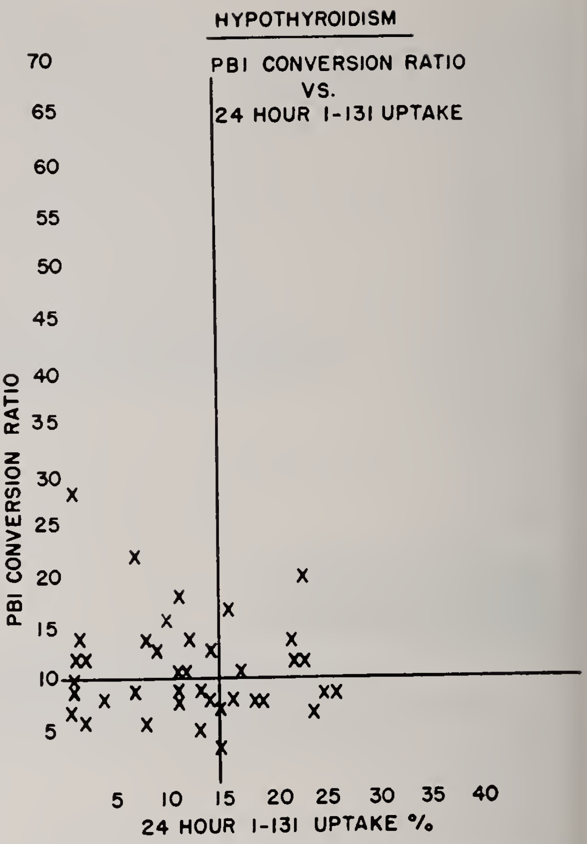
A better approach can be made by utilizing the 4 thyroid function studies as a basis for the laboratory report. If hyperthyroidism is suspected clinically, $PBI^{131}$-conversion ratio and saliva-$PBI^{131}$ ratio will be most important, but all the function studies will need to be considered. Similarly, if hypothyroidism is suspected, the saliva-$PBI^{131}$ ratio will have the most diagnostic significance.



SCATTERGRAM 3. Chemical PBI plotted against 24-hour $I^{131}$ uptake percentage in 46 cases of hypothyroidism. All values should lie to left of vertical line and below horizontal line. Only 11 of the cases are properly located.

## CONCLUSION

Careful radioisotope procedures with the most reliable results are of little value unless the clinician is aware of their limitations. The laboratory is no substitute for a good history and a careful physical examination. Rather, thyroid function studies with the use of radioiodine complement the clinician's opinion and to a high degree of accuracy confirm his diagnosis.



SCATTERGRAM 4. $PBI^{131}$ conversion ratio plotted against 24-hour $I^{131}$ uptake percentage in 39 cases of hypothyroidism. All values should lie to left of vertical line and below horizontal line. Eleven of the 39 cases are correctly located.

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# THE MECHANISM OF ACTION OF THE RAUWOLFIA DRUGS*

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EXTRACTS from *Rauwolfia serpentina* have been used as medicinal agents in the Far East for centuries. Although there are many other species of this plant growing throughout the world in tropical and subtropical regions, principal interest has been centered on *R. serpentina*, which grows largely in India and the surrounding area. The active principle of the plant has been extracted from the leaves, but the roots contain most of the alkaloidal substances. In ancient Indian literature extracts were reported useful in the treatment of fevers, insect and snake bites, and dysentery.[1] In somewhat later times it was used for insomnia, hypochondria and insanity, and still later for hypertension. Isolation experiments to obtain the active principles were conducted in the latter part of the last century, but the first crystalline alkaloid was not isolated until 1931. Since that time intensive work by scientists in many countries has increased the number of individual substances isolated to a dozen or more.

Many of the alkaloids isolated from Rauwolfia have been shown to be almost or completely inactive in clinical usage. Reserpine, which in 1936 was one of the first crystalline alkaloids to be isolated, has remained as the most widely studied and one of the most potent principles. Klohs et al[2] isolated rescinnamine from *Rauwolfia serpentina* in 1954. This compound was shown by Cronheim and his associates[3] to have pharmacologic effects similar to those of reserpine, but in some respects it has seemed to be weaker.[4, 5] Another potent alkaloid, deserpedine, was also reported isolated in 1954.[6, 7] The pharmacologic activity of deserpedine lies in the same range as that of reserpine.[8]

Since all of the potent alkaloids of Rauwolfia have similar pharmacologic action and since most of our clinical and experimental information is on reserpine, this discussion will be confined to that alkaloid. Although there may be differences in the mechanism of action which are not apparent to date, it is assumed that the tranquilizing Rauwolfia alkaloids represent the most important group of actions of these drugs and that they utilize the same mechanism of attaining that effect.

The general concept of the mode of action of reserpine was originally proposed by Bein[9] in 1953. According to this investigator the signs of parasympathetic predominance (miosis, hypothermia, hypotension, bradycardia, increase in gastrointestinal activity, and general inactivation or tranquilization) are presumed to be caused by a reduction of activity of the sympathetic regulating centers. Schneider[10, 11] then showed that the blood pressure rise after electrical stimulation of the central sympathetic substrates in the hypothalamic area was not antagonized by reserpine, but that vascular reflexes such as the carotid occlusion reflexes were blocked. This was interpreted to show that the effect of reserpine on the central sympathetic structures was due to blockade or inhibition of afferent impulses to these centers.

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* Presented at the Golden Anniversary Meeting of the Southern Medical Association in Washington, D. C., November 12, 1956.

Although the main effects of reserpine are restricted to autonomic function, evidence has been presented to suggest effects on other parts of the central nervous system. Schneider and Earl[12, 13] showed that animals, even under high doses of reserpine, could be aroused easily from their state of tranquilization, a condition which could be distinguished electro-encephalographically from sleep induced by barbiturates. Furthermore, other workers[14, 15] had reported signs of Parkinsonism in patients under prolonged treatment with large doses of reserpine. In addition, Barsa and Kline[15] reported that the convulsive threshold to electroshock therapy seemed to be lowered after reserpine. These facts suggested that reserpine might have a far more general influence on the central nervous system, but that these drug effects which could not be attributed to the autonomic nervous system became evident only after prolonged administration of high doses. Because of these related findings Schneider et al[11] were led to further investigation of the effect of reserpine on synaptic transmission in the spinal cord. They found that in cats there was a definite facilitation of transmission in central synapses by reserpine. Schneider et al have postulated that reserpine produces parasympathetic predominance associated with inhibition of afferent impulses. They further suggested that different synapses in the central nervous system might also be affected at different dose levels of reserpine.

Some of the most interesting and possibly most significant observations related to the action of reserpine have been related to its effects on serotonin (5-hydroxytryptamine) metabolism. It will be recalled that serotonin was originally thought to be a pressor substance and was isolated and identified only 8 years ago by Rappaport and his associates.[16, 17] Serotonin has been shown to be derived from the normal intake of the essential amino acid, tryptophan.[18] It is produced and metabolized in large quantities in the recently recognized "malignant carcinoid syndrome."[19] Most of the manifestations of this syndrome have been attributed to the associated hyperserotonemia. The majority of the earlier studies were carried out with bio-assay procedures which left much to be desired. Recent development of chemical technics for the determination of small quantities of serotonin in blood or tissues has greatly facilitated studies in this field.[20, 21]

Brodie and Shore,[22] working in the laboratories of the National Heart Institute, have postulated that the action of reserpine is mediated through its effect on serotonin. They propose that serotonin and norepinephrine are the chemical mediators in the central autonomic nervous system. Since serotonin is proposed as the mediator for parasympathetic effect the action of reserpine on serotonin metabolism and the biologic actions of serotonin assume considerable importance to any consideration of the mechanism of action of reserpine.

It has been shown that serotonin exists in many tissues of the body but that the principal stores are in the gastrointestinal tract, the blood platelets, and the brain, especially the brain stem and hypothalamus. This "bound" serotonin is inactive. "Free" serotonin is found in the plasma in small amounts, but it is rapidly metabolized and excreted as 5-hydroxyindole acetic acid (5-HIAA). Studies have revealed that the administration of reserpine to animals resulted in a large excretion of 5-HIAA in the urine as a result of a release of serotonin from the tissues.[23, 24, 25] The central effects of reserpine have been shown to persist long after the disappearance of reserpine from the brain and to parallel the serotonin level. After an intravenous injection of reserpine (5 mg. per Kg.) in animals, the reserpine has completely disappeared from the brain in 2 hours, but at this time the serotonin level is just reaching its low point. The serotonin level remains down for 36 to 48 hours and then begins a gradual rise toward normal. Hypothermia, hypotension, etc. persist for over 48 hours. The restoration of normal temperature and blood pressure is temporally related to the changes in serotonin concentration.[26]

That the release of serotonin must be considered in the mechanism of action of reserpine is further demonstrated by studies with iproniazid, a potent inhibitor of serotonin metabolism. In the presence of iproniazid the usual effects of reserpine are reversed, producing excitement, hyperthermia and hypertension.[27] Examination of the brain of experimental animals has shown that the brain serotonin level does not fall as it does after reserpine alone. It is proposed that when reserpine alone is administered the serotonin is rapidly metabolized and thereby inactivated. Iproniazid, by blocking serotonin metabolism as it is released from its binding sites, produces an unusually high amount of "free" or physiologically active serotonin. The same group of symptoms can be produced by the administration of 5-hydroxytryptophan (5-HTP), an immediate precursor of serotonin. Also, lysergic diethylamide (LSD) produces essentially the same reactions in animals. LSD has been shown to inhibit the actions of serotonin on smooth muscle, and it has been suggested[28] that the central action of this drug resulted from the inhibition of serotonin centrally.

That some release of serotonin from the brain occurs during administration of reserpine in therapeutic doses in man may be inferred from the following experiments. Administration of reserpine (0.02 mg. per Kg.) to guinea pigs results in a total release of serotonin from the platelets and 50 per cent release from the brain after several days.[29] In man at the same dosage a comparable effect on platelets has been observed.[30] It is suggested that the effect on the brain is also the same.

Brodie and Shore[22] have pointed to the localization of both serotonin and norepinephrine in the phylogenetically ancient areas of the brain and think that this supports their involvement in the more fundamental functions of the brain (regulation of temperature, blood pressure, etc.). They further suggest that serotonin may be a transmitter substance involved in stimulation of parasympathetic centers in subcortical areas or that it may be involved in the inhibition of sympathetic centers; norepinephrine may then be the transmitter substance for central sympathetic impulses. They have attempted to explain many observed pharmacologic events with this theory. Thus, since LSD blocks the actions of serotonin on smooth muscle, it would make sense if it acted in a corresponding manner centrally. Central inhibition of serotonin action should then result in sympathetic effects, which are, indeed, produced by LSD. This is, of course, at variance with the observed similarity of action of 5-HTP and LSD. The explanation put forward has been that an excess of serotonin as is produced by 5-HTP or by iproniazid and reserpine is self-inhibitory and thereby inhibits central serotonin action. Reserpine not only releases serotonin but enables serotonin as it is formed to be presented in small amounts, thus enhancing central parasympathetic effects. Although chlorpromazine does not interact with serotonin in any way, its actions are similar to those of reserpine. The sympatholytic actions of chlorpromazine suggest a similar action centrally. Inhibition of central sympathetic transmission would produce parasympathetic-like effects. This theory of Brodie and Shore is probably an oversimplification, but it gives us a working hypothesis and some clues relative to the mechanism of action of reserpine.

## SUMMARY

It is quite clear that the administration of reserpine is accompanied by a marked effect on the capacity of body cells to store serotonin. The effects of reserpine on serotonin-release lag behind the peak levels of reserpine in the blood or tissues, and these effects on serotonin stores persist long after no reserpine can be demonstrated. Furthermore, only those Rauwolfia alkaloids with a tranquilizing effect have any effect on serotonin metabolism. It is not likely that reserpine effect is produced by a metabolite, since large and small doses produce the same intensity and duration of pharmacologic effects and the time for the restoration of serotonin levels is the same with the two doses.

The effects of reserpine are essentially those produced by central parasympathetic stimulation or sympathetic suppression. Much experimental evidence has accumulated to suggest that the action of reserpine is motivated through its effects on serotonin metabolism and that serotonin acts as a chemical transmitter of the central parasympathetic nervous system.

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# HOW PRACTICAL IS THE CERVICAL SMEAR IN THE DIAGNOSIS OF CARCINOMA?*

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IN RECENT YEARS more and more emphasis has been placed on the use of large scale screening methods to detect early and unsuspected disease in the general population. Critical evaluation of this mass of material must be made to determine whether the number of cases which would not have been found except by the use of these technics compensates for the time, effort and expense involved. The use of the cervical smear as a screening test represents a case in point.

As early as 1923 Papanicolaou became aware of the diagnostic possibilities of cytology and recognized the fact that cancer of the fundus and cervix were exfoliative lesions in the sense that cells at the free surface of the growth tend to be dislodged and find their way into the vagina. He presented his classical paper on the diagnostic value of vaginal smears in carcinoma of the uterus before the New York Obstetrical Society in 1941. Since that time the technic has been used widely and is recognized now as an accepted method in cancer detection.

Although many authorities regard the smear as an important screening test, there are certain factors inherent in the technic which limit its value in this connection. It is generally recognized that the cervical smear is of limited value in the detection of endometrial cancer and therefore logically would not be used as a screening test in the usual sense for cancer of the uterus as a whole. In regard to the cervix, if a grossly suspicious lesion is present, cytologic examinations are superfluous, since histologic confirmation of the diagnosis is a prerequisite to therapy regardless of the cytologic reports. The use of the smear as a screening test would therefore appear to be limited to the possible detection of early lesions of the grossly normal cervix if adequate pelvic examination is made at the time of the test.

To estimate the expected cancer yield from the use of the smear, one must take into consideration the prevalence of carcinoma of the uterus in the female population at large. Foote and Li[1] in their discussion of this problem relied on 2 sources. Levin, of the New York State Division of Cancer, and Salt, of the Department of Statistics, Memorial Hospital, New York, independently estimated that in the female population at large one would expect to find 1 case of carcinoma of the cervix per 1,500 women 35 years of age or over. Statistical analysis made under the supervision of Culter of the Biometry Section, National Cancer Institute,[2] of the material obtained in the current Memphis and Shelby County, Tennessee study indicates a total prevalence rate of 1 to 1,307 for cancer of the cervix, 1 to 8,929 for cancer of the corpus, and 1 to 1,030 for cancer of the uterus as a whole. Prevalence here is defined as the average number of patients known to have cancer at any time during each study year per 100,000 female population. These figures incidentally should not be confused with the prevalence of the disease in women seen in cancer detection clinics. This, of course, is higher, since many of these women come for examination because of symptoms. Furthermore, it is known that the prevalence of cancer of the cervix and corpus varies in different races and localities. The prevalence of carcinoma of the grossly normal cervix is probably not known but obviously must be considerably less than the overall prevalence for all cervices.

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* Presented at the Golden Anniversary Meeting of the Southern Medical Association in Washington, D. C., November 12, 1956.

If the estimate accepted by Foote and Li is used, it would be necessary theoretically to make and examine 3,000 slides (2 per patient) in order to find 1 case of carcinoma of the cervix. At a minimum of 10 minutes per slide, 500 hours of microscopy would be necessary to detect 1 case.

Nesbitt and Brack,[3] after a review of 5,617 women studied by cervical smear, vaginal smear and biopsy, concluded that the greatest value of the cervical smear lies in the detection of early cervical cancer and it should be used as a screening technic for the detection of lesions in the grossly normal cervix. However, their own figures do not seem to support this conclusion. In 310 proved cases of cervical cancer their absolute accuracy of diagnosis by the initial smear was 71.6 per cent. When doubtful smears (Class III) were included, the accuracy was 86.1 per cent. A screening test which misses between 15 and 30 per cent of cases leaves much to be desired. When one considers the low prevalence mentioned previously and the per cent of cases missed by the smear technic, the value of the procedure must be seriously questioned.

In 1951 Jones[4] reviewed the findings in a group of 8,955 supposedly normal women seen in certain detection centers in Maryland. A general physical and pelvic examination was performed on each woman, and 4,024 had cervical smears; 2,444 or 57.3 per cent were noted to have at least 1 gross pelvic abnormality. Twenty-one of the patients were found to have cervical carcinoma. In 10 of these there was clinical suspicion of the disease. In addition, 17 were suspected of having cancer, but biopsies were negative. Of the 21 cases found, 9 had smears taken, showing 1 in Class II, 5 in Class III, and 3 in Class IV. In 1 patient in Class III the biopsy of a malignant lesion was overlooked at the time the smear was taken. One cancer would have been missed if biopsy had been reserved for Class III or higher. No cancer was found in any patient considered clinically normal in every respect, although in many cases of cancer only minimal abnormalities were present. Jones thought that it is necessary to inquire whether the smear will lead to the diagnosis of a sufficient number of cases that would be missed by other standard methods to justify the time and effort involved. He concluded that in this series the smear did not add statistically to the cancer yield.

Shields Warren and other Boston investigators[5] in a study based on single vaginal smears taken on 2,495 subjects surprisingly concluded that the error among symptomless subjects would be 4 per cent and among those with a history of bleeding at least 16 per cent. The percentage of questionable diagnoses was about 4 times as great among those with a history of bleeding as among those who did not mention bleeding. They thought that the large error found among the group most likely to have cancer impairs the value of the test as a diagnostic entity for screening purposes. They noted that cytologic diagnosis as an adjunct to biopsy, particularly in the study of obscure or borderline lesions, is an entirely different proposition from its use as a screening technic.

Kraushaar et al[6] examined 5,314 women by the sheath and applicator method of taking smears. They concluded that the cytologic method can be used to select women who need further evaluation but also state that each method, cytologic, clinical and histologic alone, shows an appreciable error rate. However, by coördinating all these methods of detection, very few genital malignant lesions will escape detection. It follows that the use of the cytologic method alone as a screening test automatically eliminates a large group of women from the benefits of clinical and histologic study.

These reports from the literature lead to the conclusion that the smear test without an adequate history and pelvic examination is not sufficiently accurate to be used as a screening test. This criticism applies to such programs as that of the Department of Health, Education and Welfare organized to test certain of its women employees. The test is made by a female technician without a professional examination or history-taking. The memorandum to prospective examinees[7] states that "a simple vaginal smear test has been developed by which this kind of cancer can be detected at a very early stage before symptoms appear. At this early stage uterine cancer is practically 100 per cent curable." Such statements without qualification are misleading and give the examinee a false sense of security in the belief that she has had an adequate examination.

What then is the proper application of the cervical smear in private practice? In an effort to answer this question 2 groups of private patients were selected for study. One series of smears was obtained from a group of gynecologic patients in an office where the practice has been to take smears on a selective basis (R.B.N.). In this group no clear-cut, absolute indication for taking a cervical smear was used, but such general factors as age, cervical abnormalities, suspicious history, and request by the patient were used. It is obvious, therefore, that these patients do not represent a cross section of the population. The second group was comprised of smears taken as a routine office procedure on all women undergoing a general physical examination (E.W.N.). Practically all the smears in both groups were examined by the same pathologist (T.W.). The classifications were reported as follows:

Class I. Negative.
Class II. Abnormal cells which result from infection, hyperplasia, etc.
Class III. Abnormal cells slightly suspicious of cancer.
Class IV. Abnormal cells suggestive of but not diagnostic of cancer.
Class V. Carcinoma.

The study of the first group comprised a review of 484 cervical smears taken on 421 women. On 397, or 94.3 per cent, 1 or more smears were reported as negative, 22, or 5.2 per cent, were found to have 1 or more cervical smears slightly suspicious of carcinoma (Class III), 1 was reported as revealing cells suggestive of but not diagnostic of carcinoma (Class IV), and 1 was diagnosed as cancer (Class V).

In the group of 397 women with Class I and Class II reports 1 patient with repeatedly negative smears was shown ultimately by curettage to have endometrial carcinoma.

In the group of 22 patients with Class III smears 3 were later proven to have cancer: 1 a carcinoma in situ, 1 an early invasive squamous carcinoma of the cervix, and 1 an endometrial carcinoma. The case of carcinoma in situ is of interest because the cervix appeared well-epithelialized and cancer was not suspected clinically. However, the patient had complained of a vaginal discharge of 2 years' duration. The case of early invasive cancer of the cervix had a clinically apparent lesion and could have been diagnosed originally by biopsy. However, treatment would have been further delayed had not a smear been taken in a cancer detection clinic and the report returned to her family physician who had treated her previously for a cervical erosion without a smear or biopsy. The case of endometrial carcinoma presented a grossly normal pelvis, but here a curettage would have been advised in any case because of her history of postmenopausal bleeding at the age of 65. In these 3 cases all had an abnormal clinical history or clinical findings. The only case which would have been missed without the smear was the carcinoma in situ since here, as the cervix was normal in appearance, a biopsy ordinarily would not have been taken.

Both the woman with the Class IV and the woman with the Class V smears were shown by curettage to be without malignancy.

This group of 421 women spent $2,420.00 for smear tests with the result that early cancer was detected in 1 case and diagnosis and treatment was delayed in another. This would seem to confirm Jones' impression from the study of a larger series that the use of the smear per se did not increase the cancer yield.

The second group comprised 431 patients for whom 760 cervical smears were taken during the past 8 years as a routine procedure in an internist's general examination. In 384, or 89 per cent, of the patients no positive smears were found. However, 1 patient, a 60-year-old woman whose smear had been negative 6 months previously, was shown to have endometrial carcinoma by curettage performed because of sudden uterine bleeding 15 years after her menopause.

Class III smears were obtained from 43 patients. One of these, a 63-year-old woman with sudden vaginal bleeding 15 years after a subtotal hysterectomy, was found by biopsy to have carcinoma of the cervical stump. Here biopsy would have been necessary in any case because of the clinical findings. No cancer is known to have developed in the remaining 42 cases, 22 of which have been followed with negative smears over a period of 1 to 7 years. Malignancy was ruled out in 3 cases by negative curettings and in 3 cases by hysterectomy for fibroids. Nine are under observation, and the remaining 5 have not been seen for 2 years. One patient was reported to be in Class IV. Repeated smears and examinations during the past 3 years have revealed no evidence of cancer. Class V smears were obtained from 3 patients. An immediate curettage on 1 of these was negative, as have been subsequent yearly smears since 1951. One patient aged 63 complained of postmenopausal bleeding, and curettage revealed carcinoma of the cervix. One woman aged 45 complained of excessive menstrual bleeding with severe anemia, and cervical biopsy revealed carcinoma in situ. In both of the Class V cases ultimately shown to have cancer biopsy would have been indicated without the smear. In this series of cases also the cancer yield from the smear alone was zero. Furthermore, 1 patient with a negative smear was found to have cancer 6 months later.

## CONCLUSIONS

Two series of cases have been reviewed. In one, the smears were taken selectively; in the other, routinely. From these studies, it appears that the smear method may be worth while in that a very occasional case of early carcinoma of the uterus which otherwise might be missed might be detected. However, it cannot be relied upon as a complete screening test since a significant number of cases would be overlooked if biopsy were reserved for only those cases with a positive smear. Significantly, in this series, as in that of Jones, no cancer was found in those cases which were clinically completely normal.

Furthermore, one must consider the false assurance which doctor and patient may receive from a false negative smear. Also in estimating the overall cost, one must allow for the expense incurred by those patients who are hospitalized for curettage because of positive smears and ultimately proved to be without disease. These patients might well wish that the smear technic had never been devised.

With these observations in mind, in private practice one would appear to be justified in using the smear as an adjunct rather than as a routine screening procedure. In short, it seems that while the cervical smear may be considered a part of a completely perfect cancer detection examination, from a practical point of view, in private practice at least, its selective use in conjunction with other carefully done standard procedures is justified.

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(*Continued on page 222*)

# A NEW AGENT FOR THE CONTROL OF HEADACHE*

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SUBCUTANEOUS injection of ergotamine tartrate and intravenous injection of dihydroergotamine are still the most rapid and reliable methods for the alleviation of acute attacks of migraine and other related vascular headaches.[1, 2]

In an effort to avoid the necessity for parenteral administration, many new combinations have been made available for oral and rectal administration during the past few years. These include Cafergot, Cafergot Suppositories and Cafergot P-B Suppositories.[3-15]

During the typical migraine attack, the patient is usually tense, nervous, apprehensive and agitated, and his stomach is so upset that it is often difficult to retain medication by mouth. It is for this reason that the rectal route of administration has been adopted during the recent years. Our experience has been especially successful with Cafergot P-B Suppositories† in that the patients' gastrointestinal, nervous and emotional manifestations were allayed with the Bellafoline and pentobarbital, while the ergotamine-caffeine component contained in the Cafergot P-B Suppositories relieved the headache phase.

We have attempted to provide the same nervous and gastrointestinal relaxation with an oral preparation. When a patient has been studied adequately in the Headache Clinic and has had the mechanism of production of headache explained to him in detail, he usually is able to detect well in advance when an attack of headache will begin. At this stage he is able to recognize that the attack is imminent and does not have to await the development of a severe, throbbing headache or nausea and vomiting to know he is headed for trouble. The various factors leading to the headache attack and the role of mounting tension preceding the attack in these patients are described in detail[11] in a recent series of articles on our Headache Clinic. These patients have been taught what their limits are, and they must learn to recognize when they are exceeding these boundaries. With this information and the experience they have gained they are now able to recognize the migraine attack early and to institute therapy with oral medication. The most recent combination of ergot and caffeine has been Cafergot P-B Tablets.‡

Patients are instructed to take 2 tablets at the onset of the headache and repeat 1 tablet every half hour until a total of 4 tablets has been taken. It has rarely been necessary to use more than 2 or 3 tablets for an attack. If a patient does not heed all of the above-mentioned signs and nausea and vomiting occur, Cafergot P-B Suppositories or parenterally administered ergotamine or dihydroergotamine will terminate his attack.

Cafergot P-B Tablets first became available to us in July 1955, and we have had experience with its use in 67 patients with various forms of periodic headache. When the above instructions and warnings were observed, all but 5 of these patients were able to retain these tablets and obtained satisfactory results. Thus, it is evident with a combination of oral and rectal Cafergot P-B the physician is in a much better position to control his patient's acute attack of headache.

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† Contain ergotamine tartrate 2 mg., caffeine 100 mg., Bellafoline 0.25 mg., and pentobarbital sodium 60 mg.

‡ Supplied by Sandoz Pharmaceuticals, Hanover, New Jersey; contain pentobarbital sodium 30 mg., Bellafoline 0.125 mg., caffeine 100 mg., and ergotamine tartrate 1 mg.

The following cases will illustrate examples of hypertensive headache, migraine, a combination of vascular and tension headache, and histaminic cephalalgia which have responded satisfactorily to Cafergot P-B Tablets.

## Illustrative Cases

**Case 1.** Mrs. C. V., a 45-year-old white married woman Government worker, was first seen on November 12, 1955 with the chief complaint of headaches since the age of 9. These had occurred at irregular intervals over the years but apparently had increased in frequency and severity since 1954 and were practically constant at the time of her first visit. These headaches often awakened her and would begin with a nervous, tense feeling and a grinding sensation behind the ears and at the top of the head. There were occasional sharp, shooting pains about the head, gradually developing to a throbbing, aching sensation. There were associated nausea and vomiting and occasional photophobia, diplopia or blurred vision. There was no associated rhinorrhea or nasal congestion. Occasionally vertigo, tinnitus and a plugged-up, stuffy feeling of the ears accompanied the headache, and occasionally there was a paroxysmal tachycardia with it. A daughter also suffered from similar headaches.

Physical examination revealed the patient to be in good general condition. There were moderate thickening of the glands in the right breast and multiple small nodules of the thyroid gland. Laboratory examinations including urinalysis, complete blood count, serologic test for syphilis, blood sugar, sedimentation rate, B.M.R., X-ray films of the skull, vaginal and cervical smears, gastrointestinal X-ray examination, and sigmoidoscopy, were negative or normal except for a rectal polyp, which was fulgurated.

A histamine skin test produced a moderately enlarged wheal and flare reaction, and a histamine provocative test with 0.35 mg. of histamine given intramuscularly produced a typical throbbing headache in ½ hour. Intravenous injection of 1 c.c. dihydroergotamine relieved this headache within 15 minutes after its onset.

It was our impression that the patient had a predominantly vascular headache of the migraine type associated with tension features. For this reason several long and detailed discussions of her background and family situation were held. As a result of these the patient readily saw maintaining her home, working full-time at the office, assisting her newly-married, pregnant daughter with the details of setting up housekeeping, and other problems were just too much for her. All this activity maintained her in a constant state of fatigue and tension. A more relaxed regimen of work, living and recreation was prescribed for her. She was advised to take 1 Fiorinal tablet 3 times a day in an effort to help reduce the general level of tension and, in particular, muscular spasm about the back of the head and neck. She soon found that this regimen decreased the frequency and severity of her headaches. She soon was able to relate increased responsibility with individual attacks. She was then advised to take 2 Cafergot P-B Tablets prior to the onset of an attack and repeat with 1 in ½ hour if necessary. She reported that, if she was able to recognize the attack at its very onset, usually 2 tablets worked well and she felt much relieved within 1 hour. The only time she had difficulty was when she awakened out of her sleep with such a severe attack that she was already nauseated and could not retain any medication. For these rare occasions she was instructed in the use of Cafergot P-B Suppositories. One suppository inserted immediately with this condition relieved the headache within an hour.

It is seen from this case that by proper orientation and a hygienic mode of living the patient was able to be in control of her situation and not be continually overwhelmed by the mounting tension and fatigue which seemed to act as the trigger to produce her headaches. She now has gained confidence in her ability to manage her affairs and to control the headache itself when and if it appears. This has given her relief from the constant fear complex in which she lived. This fear complex is a common finding in people with these headaches. They plan their daily life around the possibility, and indeed, probability, that a headache will come along to upset their routine. They therefore are increasing their anxiety and tension markedly by this overconcern with an attack that might or might not come. Explanation of this situation to the patient and reassuring him that he can be in control of the situation go far toward removing this cause of mounting tension.

**Case 2.** Mrs. S. D., 39-year-old white married woman, was first seen on December 12, 1953, with the complaint of headaches which she had had since 1938. They usually occurred every month preceding her menstruation. However, she would often get another such attack at other times during periods of fatigue or stress or strain. They lasted 24 to 72 hours in spite of anything that she did. They usually began in the morning, upon arising, with a localized pain, boring through both temples. The temples later would become sore and tender. The blood vessels stood out on the side of her head for 2 to 3 days; the eyes felt large and strained, and there was blurring of vision. In addition to this, there were considerable nausea and profuse vomiting. Before her periods she noticed an increase in weight and congestion and tenderness of her breasts. Interestingly she had had no headaches during her single pregnancy in 1949. Also, she had had a period of amenorrhea in the spring of 1953 lasting 3 months, during which time there was no headache. The family history and past personal history were entirely negative.

Physical examination revealed the patient to be in excellent general condition. There was a mild, bilateral cystic mastitis. The thyroid gland was slightly enlarged. Palpation of the head revealed tenderness about the temples.

The battery of laboratory examinations as in case 1 were negative or normal.

A histamine skin test was moderately positive; a histamine provocative test with 0.35 mg. histamine diphosphate injected intramuscularly produced a definite mild, flushed, full feeling of the head which went away in approximately ½ hour.

At the end of the examination several thorough and detailed discussions were had with the patient in relation to her mode of living and background. Whenever she was under periods of excess stress, fatigue, strain in any direction, such as illness in her child or unexpected company, she would experience overwhelming fatigue which would result in headache. She would be quite fatigued, listless, gain weight and feel bloated and congested before her period. This increase in symptoms preceding menstrual periods is a very common finding in these women.[14] At times it has an actual endocrine basis; however, it is often a manifestation of anxiety over the question of pregnancy. Either the patient is anxious to become pregnant and fears she will not, or more often she does not wish to become pregnant and fears she might. It is only easy to understand what a tremendous factor this can be in building of tension. Because of these factors the patient was instructed in a more hygienic mode of living in an effort to limit her expenditure of energy to the amount of energy she had to spend. An appropriate diet was outlined and 1 Fiorinal was to be administered every 4 hours. She was instructed to take Proluton* 10 mg. linguets t.i.d. for the 10 days before her period. On this regimen she noticed that for the most part she got along very well except for the continued reappearance of the headache with her period. For this reason she was instructed in the use of Cafergot Tablets to be taken 2 at the onset of the headache, repeating 1 every ½ hour until a total of 6 tablets had been taken. She soon learned to be able to recognize an impending attack and to take the Cafergot early enough to be of benefit. However, since occasionally she awakened with too severe a headache or did not pay attention to the early symptoms before nausea and vomiting had developed, it was necessary to change to Cafergot P-B Tablets, which control the nausea and vomiting. Since then she has taken Cafergot P-B as directed on the average of once or twice a month for her migraine attacks. She has had no trouble with nausea or vomiting with these new tablets. They seem to be just as rapidly effective as the others and she reports no side-effects of any kind. They relieve the pain in from 15 to 20 minutes.

**Case 3.** Mrs. C. W., 38-year-old married colored housewife, was first seen at the Headache Clinic on February 14, 1955, with the chief complaint of daily headaches of 3 years' duration. She had previously been thoroughly examined and treated at the Hypertension Clinic. Her blood pressure ranged between 200 and 230 systolic with approximately 120 diastolic. She had been maintained on reserpine, 0.25 mg. t.i.d., and phenobarbital, 30 mg. t.i.d. With this treatment her pressure dropped to 170 to 180 systolic over 90 diastolic, but her headaches were unchanged. In addition to her headaches she had had angina pectoris of moderate degree for several years. The angina improved considerably on the antihypertensive regimen but still gave her occasional difficulty upon exertion.

Physical examination revealed the only abnormality to be moderate enlargement of the heart. The blood pressure was 170/90. Laboratory examinations showed nothing of significance.

The headaches were thought to be due to the hypertension. The patient was advised to sleep with the head elevated 8 inches above the feet, use a low-salt diet, keep her bowels well regulated, and continue on the hypertensive regimen. She was also instructed to take 1 or 2 Fiorinal† tablets every 4 hours as needed for headache. However, she continued to awaken every morning with a headache. She described this as a constant, generalized, heavy, dull, full, congested feeling about the head, forehead and back of the neck, and stated that it took her several hours to get over it each morning. On several occasions her blood pressure was determined early in the morning and was seen to be as low as 150/85. It was therefore our opinion that there was more to this complaint than just hyperten ion, because even though the pressure was low she still experienced these symptoms. These symptoms are similar to those many patients suffering from migraine and other vascular headaches experience following acute bouts of headache, and this type of symptom might linger for hours or even days after the attack. For this reason it was decided to administer 2 tablets of Cafergot P-B nightly upon retiring in an effort to prevent the congestion of the cerebral blood vessels while in a supine position during sleep. The patient has been on this therapy for approximately 3 months and has had practically complete relief of symptoms. She rarely has a headache upon arising and is able to get started and do her day's work without taking the usual 3 or 4 hours to get going. She has reduced the dose of Cafergot P-B to 1 tablet at bedtime and still continues with her improvement. On several occasions medication has been discontinued with a return of symptoms such as were observed before the institution of this therapy.

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* Readily absorbable progesterone, supplied by Schering Corporation, Bloomfield, New Jersey.

† Contains isobutylallylbarbituric acid 50 mg., caffeine 40 mg., acetyl salicylic acid 200 mg., and acetophenetidin 130 mg.

Repeated examinations, including electrocardiograms, have been performed and there has been no evidence of change in her hypertension or cardiac state since using this therapy.

**Case 4.** Mr. B. C., a 23-year-old white male office employee, was first seen on February 9, 1955 with the chief complaint of recurrent headaches of 18 months' duration. During this time the longest pain-free interval was approximately 6 weeks. The headaches occurred at times daily but usually several times a week. The typical attack began approximately at 10 a.m. with the sudden onset of pressure behind the right eye and cheek. There was then radiation to the right side of the forehead up to the hairline and right side of the face. The pressure gradually built up. There was redness and watering of the right eye and the right nostril ran profusely. This usually developed into a severe throbbing pain on the right side of the head. During an attack the patient could not lie down and had to sit propped up either in his chair or in bed. There was associated profuse perspiration on the right side of the face and head. He also had noticed that on the mornings when he was able to sleep later than usual he would awaken with a dull headache which often was relieved after drinking coffee. The attacks usually persisted from 45 minutes to an hour and a half but left him completely "washed out" the rest of the day, with a mild, stuffy, congested, hangover feeling in his head. The only other significant factors in the history were asthma and hay fever, which were definitely worse in the spring and summer.

Physical examination revealed him to be in excellent general condition. The only positive finding was a venous pattern seen in the right retina during the attack.

Laboratory examinations showed nothing of importance.

A histamine skin test was strongly positive, and a provocative histamine test with 0.35 mg. of histamine given subcutaneously produced a definite flushed feeling and a typical headache.

The patient was advised to take Chlor-Trimeton Repetabs, 8 mg. in the morning and at bedtime. He was instructed to sleep in the head-up position, to keep his bowels open, and to follow a low-salt diet, all of which procedures assist in preventing increased congestion of the cerebral vessels. He was also instructed to take 2 Cafergot Tablets at the onset of the headache and another in ½ hour if necessary. On this routine he found that the incidence of his headaches was markedly reduced, the Cafergot aborting most of the headaches. Because of this satisfactory response, histamine desensitization therapy was not instituted. The patient was again seen on March 21, 1956 with the report that he had had only an occasional intermittent headache until March 1, 1956. Since then they had occurred daily, would persist in their intense severity for approximately 2 hours, and leave him with a slight, throbbing sensation in the head for the rest of the day. He had now noticed that they might occur and awaken him in the middle of the night if he was in a warm room or if he had ingested alcohol in any form the previous evening. The Cafergot Tablets lessened the duration and severity of the head pain but left him with a hangover-like feeling for the rest of the day. For this reason he was instructed to take 2 Cafergot P-B Tablets at the onset of headache. He was also started on subcutaneous histamine, 0.275 mg. of histamine diphosphate, per c.c. He was instructed to take 0.25 c.c. of this subcutaneously twice a day, and to gradually increase the dose up to 1 c.c. On this regimen the incidence of the headache was markedly reduced. If he had a headache occur during the day 2 tablets of Cafergot P-B at the onset would produce some relief within 20 minutes and complete relief within 45 minutes. The redness and watering of the eye, running of the nose, and perspiration of the right side of the face and head were barely perceptible after the use of the Cafergot P-B Tablets. His head felt entirely clear the rest of the day. He has completed his course of histamine desensitization, and his headaches are quite well controlled with the occasional use of the Cafergot P-B Tablets.

## Discussion

When symptoms of autonomic instability are present such as nervousness, irritability, gastrointestinal upset, perspiration, watering of the eyes, watering or congestion of the nose, or tachycardia, Cafergot P-B Tablets have been found to be efficacious in relieving the vascular headache associated with these manifestations without fear of enhancing these associated symptoms, as often was the case with previous medication.

Cafergot P-B Tablets were also found of benefit in alleviating associated symptoms that accompanied the headache. From our experience it was seen that the average dose necessary to relieve these attacks was 2 tablets given at the onset of the attack. In many instances 1 tablet early in the attack was sufficient, but an occasional patient required up to 4 tablets with 2 at the onset of the attack and repeated 1 each half-hour for 2 doses. The onset of action ranged from 15 to 30 minutes. As evident in the cases cited not only did the medicine relieve the headache itself, but the patients volunteered that it also left them without the usual dull, heavy, loggy, hangover feeling that often followed a spontaneously aborted attack. The 67 patients have taken Cafergot P-B Tablets from 1 to 12 months. In some the dosage has ranged as high as 14 tablets per week. We have seen no untoward side-effects except the inability to retain the tablet if the patient waited too long before beginning therapy. In these cases the Cafergot P-B Suppositories were useful.

It is interesting to note that our hypertensive patients with and without coronary arteriosclerotic disease and even with anginal symptoms have not only benefited from the therapy but have experienced no exacerbation of cardiac symptoms. As a matter of fact, the reverse is true in so far as enabling several of the hypertensive patients to obtain a good, full night's sleep and to awake refreshed. The mere fact that they have had satisfactory relief and have gained confidence that they will go to sleep and get a good night's sleep without being awakened early in the morning with a typical hypertensive headache has acted as reassurance to these patients and in our opinion has enabled them to relax and sleep in a normal manner.

## Summary

Sixty-seven cases with recurrent, throbbing headaches such as migraine, histaminic cephalalgia, and combinations of vascular and tension headaches as well as hypertensive headaches were treated over a period of 12 months with Cafergot P-B Tablets. The tablets were especially useful when the headaches were accompanied by nervous tension and gastrointestinal upset. The average dose was 2 tablets per attack. Side-effects in doses up to 14 tablets weekly were not observed. Cafergot P-B Tablets constitute an important addition to the treatment of vascular headache.

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# COMBINED SURGICAL TREATMENT OF ACHALASIA OF THE ESOPHAGUS AND HYPERTROPHIC PYLORIC STENOSIS

## Report of a Case

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THE POSSIBLE etiologic relationship between achalasia of the esophagus and congenital hypertrophic pyloric stenosis has been discussed in the literature.[1, 2, 3] In addition, other lesions such as megaduodenum and megacolon with apparent abnormalities of the myenteric plexus have been linked with the above diseases.[2]

We should like to report a case of a 2-year-old child with obstruction of the lower end of the esophagus and of the pylorus, successfully treated by the Heller operation and pyloromyotomy.

### REPORT OF CASE

M. H., a 20-month-old white girl, was admitted to the George Washington University Hospital on March 16, 1956 with a history of difficulty in swallowing for approximately 1 year. This had first been noted by the parents when the child began to take solid foods. Regurgitation was usual immediately after swallowing and was not accompanied by retching. The food which was regurgitated showed no evidence of digestion.

On several occasions during the year prior to admission regurgitation had been so frequent that the child could not even take liquids, and intravenous feedings were needed. A barium swallow performed shortly before admission revealed an obstruction at the lower end of the esophagus. Attempts to dilate the esophagus under topical anesthesia were made at the local hospital but were unsuccessful. The patient was then referred to the George Washington University Hospital.

The past history and family history were not relevant.

The infant was found to be well developed and moderately well nourished. She was in the fiftieth percentile in weight for her age. Upon examination of the head, neck, chest, abdomen and extremities there were no gross abnormalities.

Blood count and urinalysis were within normal limits. An upper gastrointestinal X-ray examination demonstrated an incomplete obstruction of the lower end of the esophagus with dilatation of the proximal esophagus. In addition there was a marked delay in emptying of the stomach, with evidence of obstruction at the pylorus (figures 1 and 2).

On March 17, 1956 an esophagoscopy was performed under general anesthesia. Previous attempts to do this at another hospital using topical anesthesia had been futile. However, with the child asleep the procedure was accomplished with ease. At esophagoscopy there was no evidence of esophagitis. There was marked dilatation of the upper two-thirds of the esophagus. There was an area of constriction in the lower third of the esophagus which opened and closed with respiration. A no. 16 F bougie could be passed through this constriction, but the small esophagoscope could not be passed.

On March 19, 1956 the patient was operated upon. Under general anesthesia a short rectus splitting incision was made in the right upper quadrant. The pylorus was delivered and was noted to be hypertrophied. A Fredet-Ramstedt pyloromyotomy was performed. The incision was closed and the child turned on the left side. A

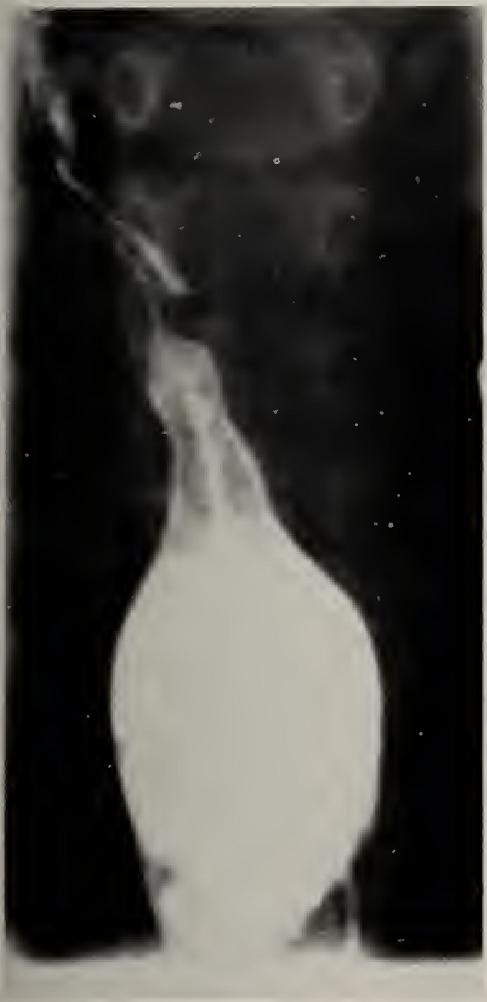

FIG. 1. Barium swallow preoperatively, showing marked narrowing of the distal esophagus and dilatation of the proximal two-thirds of the esophagus.

standard posterolateral thoracotomy incision was made and the left pleural cavity entered through the seventh interspace. The mediastinal pleura was incised, and the lower end of the esophagus including the cardia was mobilized. It was noted that the upper esophagus was dilated but that the lower 4 cm. was not dilated. A Heller esophagomyotomy was then performed from the point of dilatation down to the esophagogastric junction, a distance of approximately 4 cm. The chest was closed in routine fashion with water-seal drainage.

The postoperative course was uneventful. Liquids were started on the second postoperative day. A barium swallow on the fifth postoperative day revealed that barium passed into the stomach with no evidence of obstruction or delay. The child was discharged from the hospital on the tenth postoperative day on a soft diet.

The child was readmitted 2 months later for reëvaluation, since her mother stated that she had difficulty in swallowing some foods. Esophagoscopy at this time revealed minimal narrowing at the proximal end of the previous site of esophageal obstruction. The area was dilated with ease, and the patient was discharged. One month later the child was again readmitted for esophagoscopy. At this time an esophagoscope was passed without difficulty.

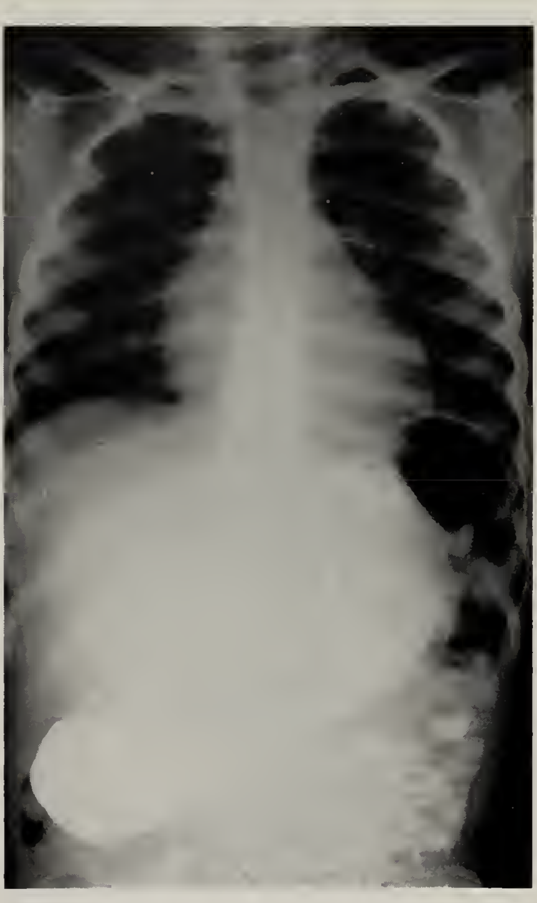

FIG. 2. Upper gastrointestinal series taken preoperatively, showing delayed gastric emptying with evidence of obstruction at the pylorus.

The child was again seen on October 14, 1956, approximately 7 months postoperatively. At this time she was taking a full diet. Barium swallow showed no obstruction or other abnormality of the esophagus. The stomach and duodenal bulb were also normal (figure 3).

## COMMENT

Achalasia of the esophagus occurring during infancy and childhood is uncommon but not rare.[1, 2, 4-7] On the other hand, congenital hypertrophic pyloric stenosis is a relatively common surgical condition of early infancy. The etiology of both of these conditions is not clear-cut.[8, 9] Many observers believe that both conditions are associated with some abnormality of the myenteric plexus at the level of obstruction.[1, 2, 3, 10] Achalasia and congenital pyloric stenosis have also been linked etiologically with megaduodenum and megacolon of the congenital type.[2, 11]

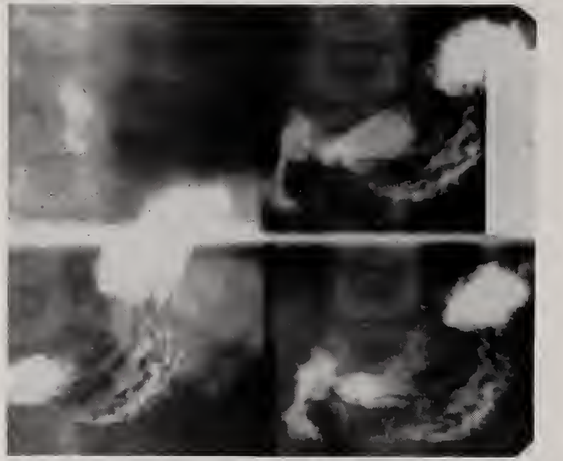

FIG. 3. Upper gastrointestinal series performed 7 months postoperatively, showing no evidence of obstruction at the cardia or pylorus; stomach and duodenum were normal.

Instances of 2 or more of these conditions appearing in 1 individual have been previously reported in the literature. The association of congenital hypertrophic pyloric stenosis with atresia of the esophagus has been reported by Gross[6] and by Schwartz,[12] Swenson,[13] and Leven.[14] Achalasia of the esophagus and other sphincters of the gastrointestinal tract occurring simultaneously have been reported by Pritchard and Hilliard, Chiabi,[15] Ehlers and others. Raia et al[1] have commented extensively on the similarity of hypertrophic pyloric stenosis to similar lesions of the esophagus and colon.

To the best of our knowledge no previous report has been published of simultaneous Heller and Fredet-Ramstedt operations on the same patient. Although the diagnosis of pyloric stenosis was not made until this child was 20 months of age, there was definite pyloric obstruction radiologically. The pylorus at operation was considerably hypertrophied and responded well to pyloromyotomy. The Heller operation, splitting the esophageal musculature at the site of narrowing, certainly relieved the majority of the lower esophageal obstruction. The remaining minimal narrowing was easily relieved by subsequent esophagoscopy.

## SUMMARY

The etiologic similarity of achalasia of the esophagus occurring in children to hypertrophy of other sphincters of the gastrointestinal tract has been pointed out in the literature. An abnormality or absence of the myenteric plexuses at the level of obstruction is felt to be the etiologic factor. The case reported herein was a 20-month-old white girl with achalasia of the lower esophagus and hypertrophic pyloric stenosis. The patient had a satisfactory result after muscle-splitting operations were performed at the pylorus and at the cardia and the lower esophagus. Two subsequent esophageal dilations were performed because of minimal residual narrowing of the lower esophagus. The simultaneous occurrence of these conditions in this individual and the response to the same type operation would appear to lend credence to the belief that the conditions have a similar etiologic background.

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(*Continued on page 222*)

# President's Page

## THE SOCIETY'S BUILDING PROGRAM

Personally, I was very much pleased with the Society's decision to go forward with a building program. It emphasizes again that our membership is conscious of the fact that no truly progressive body can remain static.

Elsewhere in this issue of the MEDICAL ANNALS there appears a complete report of the House Committee which was read to those present at the Business Meeting on March 6. There is no point, therefore, in my going into detail; however, I should like to state my own feelings with respect to the plans finally adopted.

It was my position when the various plans were under discussion by the Executive Board that, although more office space was needed and should be provided, provisions should also be made for more adequate facilities for the membership. I proposed that additional committee and meeting rooms be included in the plans, for, as I pointed out, makeshift arrangements have had to be made on a number of occasions in recent years for groups for which there was no adequate room. This, in my opinion, should not be necessary and should be remedied when an ambitious building program, such as has now been decided upon, is undertaken. I feel very strongly that the Medical Society Building should continue to be the center of medical activity in the District of Columbia. This will be possible only if necessary accommodations are available. Fortunately, the plans adopted now contain the necessary provisions.

I cannot conclude this brief message without expressing my deep appreciation to Dr. W. Ross Morris, Chairman of the House Committee, who personally has devoted much time and effort to the building program. No happier choice for this important assignment could have been made. I am particularly grateful to Dr. Morris for accepting it at the conclusion of a strenuous year as President. I also wish to extend my thanks to members of the Committee, who have given him their wholehearted coöperation.

It is the hope of every president of the Society that, at the conclusion of his administration, there will be some tangible evidence of accomplishment. If there is nothing more to show for my having served than the building program, I shall be content, because, as I have stated, it reflects the sound health and vigorous state of our organization.

Ralph M. Caulk

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# *Editorials*

## NEW LOOK FOR THE MASTHEAD

A publication, like a plant, must seek new sources of sustenance if it is going to produce healthy growth. Our own scientific journal, which is now 25 years old, and, we might say, has reached maturity, likewise must seek new sources of inspiration if it is to thrive.

The Annals took root in precarious soil 25 years ago. Dr. Wallace M. Yater, who, like the journal, has survived as Editor-in-chief to date, and the late Dr. Coursen B. Conklin, as Managing Editor, nurtured the tiny plant through the early years. Dr. Yater himself often had to provide scientific articles to meet an issue's deadline.

By 1939 the plant appeared firmly rooted but needed more nourishment than could be provided by its staff of two, the Editor and its new Managing Editor, Theodore Wiprud. In that year two associate editors, who comprised the first Editorial Board, were added to the staff. They were Dr. Hugh H. Hussey (Internal Medicine) and Dr. Roger M. Choisser (Pathology). Later other members were appointed to the Editorial Board in order to provide representation of various medical specialties. Dr. Herbert P. Ramsey (Obstetrics and Gynecology) and Dr. Winfred Overholser (Psychiatry) were appointed to the Board in 1943, and four more were added in 1946, namely, Drs. James N. Greear, Jr. (Ophthalmology), Donald Stubbs (Anesthesiology), Joseph S. Wall (Pediatrics), and Charles Stanley White (Surgery). Two years later, in November, 1948, General Medicine was included by the appointment of Dr. R. Lee Spire. Your Assistant

*Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.*

Editor was appointed to the ANNALS staff as Editorial Assistant in 1941 and accorded her present title in 1948.

The original appointees to the Editorial Board served continuously until 1951, when Dr. Frank D. Costenbader succeeded Dr. Greear, who had left Washington to practice in Wyoming. Following the death of Dr. Wall in 1952, he was succeeded by Dr. Frederic G. Burke, and the same year, Dr. Thomas M. Peery succeeded Dr. Choisser. During the past year Dr. Hussey resigned because of the additional duties he assumed when he became Head of Medicine at Georgetown and a member of the AMA's Board of Trustees. Dr. Spire resigned early in 1957.

We should like to introduce to you the two new members of the Editorial Board, Dr. George E. Schreiner (Internal Medicine) and Dr. I. Phillips Frohman (General Medicine), both appointed to the Board at the meeting of the Executive Board on January 28.

Dr. Schreiner, a native of Buffalo, New York, is a graduate of Georgetown University School of Medicine (1946). He served as a medical officer in the Surgical Physiology Department of the Army Medical Service Graduate School, Walter Reed Army Medical Center, and in 1951 went to Korea as a member of the Advance Surgical Research Team. Since 1952 he has been a member of the faculty of Georgetown Medical Center. He is Assistant Professor of Medicine at the School; he is also Assistant Director of the Renal and Metabolic Laboratory and Director of the Renal Clinic at the Hospital. His research work with the artificial kidney has received wide recognition in both the United States and abroad.

Dr. Frohman, originally of Baltimore, Maryland, graduated in medicine from the Maryland University School of Medicine in 1937, having previously received the degrees of Graduate in Pharmacy and Bachelor of Science from the same University. Dr. Frohman is Chairman of the Section on General Practice of the American Medical Association and Past Chairman of the Section on General Practice of the D. C. Medical Society. He is particularly active in the work of the American Academy of General Practice, having edited the Abstracts of its Annual Scientific Assembly for the past two years; he has also served on the Publication Committee of its official organ, GP.

Both of these physicians have contributed many articles to the medical literature.

The ANNALS now enters a new phase of growth as a State medical journal for the Washington Metropolitan Area. Like the plant, which constantly spreads its roots further into new soil, so the Editorial Board has suggested that the ANNALS staff now be augmented by a Board of Consulting Editors. These editors will seek to secure material suitable for publication from the various institutions which they represent. As time goes on, we hope you will become better acquainted with: Captain Bruce L. Canaga, Assistant to the Chief of Medicine, U. S. Naval Hospital; Dr. Walter H. Gerwig, Jr., Associate Clinical Professor of Surgery, George Washington University School of Medicine; Dr. Walter Kurland, Admitting-Personnel Physician, Veterans Administration Hospital; Colonel Francis W. Pruitt, Chief, Professional Services and Department of Medicine, Walter Reed Army Hospital; Dr. Luther Terry, Chief, General Medicine and Experimental Therapeutics Branch, National Heart Institute, Bethesda; and Colonel Frank M. Townsend, Deputy Director, Armed Forces Institute of Pathology. In order to add these names it was necessary to move the masthead from the Index to our Editorial Section.

Georgetown University and Howard University Schools of Medicine have been invited to appoint representatives to this Board, but their appointments have not yet been received.

Your Editorial Board hopes that the journal will reflect, through scientific articles, editorials, and news stories emanating from these institutions, the progressive development of medical practice and scientific research in the Washington Metropolitan Area.

A. L. E.

## RESEARCH IN AGING

Society has always been faced with the problem of taking care of its older members, and each culture has worked out methods of handling the problem. In present-day America, however, the magnitude of the problem is increasing by leaps and bounds and is rapidly rendering obsolete the cultural technics that have been more or less adequate in the past. The first and most obvious cause of this is that many more people, both percentage-wise and in absolute numbers, are living through childhood to maturity. The life expectancy at age 40 is only a little better—by 4 or 5 years—than it was 100 years ago, but during the first half of the present century the dangerous diseases of infancy and childhood have been largely conquered, and many more people than formerly have lived to reach adulthood. Since the average person of 40 can expect to live another 30 to 35 years, it is easy to picture what is going to happen to our population in the years ahead. The numbers of older people will continue to increase tremendously.

Another factor of crucial importance is that increasing industrialization during the past hundred years has tended to diminish employment opportunities for the older age group. The rural economy of the nineteenth century could keep older people busy as long as they were able to work, but with our present emphasis on the organized production of goods it is necessary to take specific action to develop jobs that older people can handle. A related factor in the total problem is that a number of organizations, wishing to protect the living standards of older persons, have fostered the development of retirement plans, under which people are encouraged, and sometimes forced, to retire from active work at specified ages.

The result of all of this is that there are increasing numbers of people in the older age groups, and an increasing number of problems to which solutions must be sought.

Research in the field of aging runs the gamut from studies of cellular physiology and biochemistry to the psychosocial problems of the adjustment of aging persons to their own aging process and to the society in which they live. Falling toward the latter end of the spectrum are the medical problems of providing preventive and curative health services for the older members of the population. These concern both the special medical technics needed for older people and the methods of providing home care and institutional care of various levels of complexity.

There is thus a need for both basic research and applied research in the problems of aging. In this context, basic research is aimed at the fundamental question of what aging actually is. At the present time, we cannot say with certainty how much, if any, of the process of aging in living organisms (including man) is the result of the passage of time per se and how much it is the result of an accumulation of disease processes and injuries. A related question is that of the normal life span. Is there such a thing as a normal life span, or is the Biblical life span of three score years and ten the resultant of hereditary factors plus disease plus injury, some of which could be partially or completely controlled or eliminated?

The field of applied research concerns itself with the problems of handling actual people in old age. It is clear that the increasing numbers of older people will force us to attack the problem on a more organized basis than we have done in the past, but here, too, there are many unanswered questions. How can we best utilize the limited resources that are available to take care of the older age groups, medically and institutionally? How can people be psychologically prepared for growing old? How can society best utilize the services of older people, both to keep them from vegetating and to gain the goods and services that they can contribute? What are the best relationships between older people and their families, and how can these relationships be encouraged and developed? When older persons need assistance in the tasks of daily living, or actual medical care, how can such assistance and care most effectively and most efficiently be provided for them? Is there a single "best way" to answer all these questions, or must we develop a whole series of answers which will meet varying situations?

These are only a few of the questions to which answers must be sought. In view of the increasing magnitude of the problem as a whole, and of the large amounts of money that will have to be spent in meeting the needs of older people in the next few decades, it seems obvious that relatively small expenditures on research in the immediate future, to get answers to some of these questions, will almost certainly result in a tremendous money saving in years to come, aside from the humanitarian considerations of doing the best that we can do for our older people.

The Federal Government has undertaken a number of research and administrative activities to attack some of these problems. In 1940 the U. S. Public Health Service started a research program at the Baltimore City Hospitals under the direction of Dr. E. J. Stieglitz. In 1941 Dr. Stieglitz returned to private practice, and Dr. Nathan W. Shock, Assistant Professor of Physiology at the University of California Medical School, was appointed chief of the unit. This research program, concerned with physiologic, biochemical and psychologic aspects of aging, has been continued to the present time and is now an operation of the National Heart Institute of the National Institutes of Health. During the past few years the National Institute of Mental Health has developed an extensive research program under Dr. James Birren, directed at neurologic, mental and behavioral aspects of the problem. In addition, much of the research work being carried on by all of the National Institutes of Health has some bearing on aging.

In 1956 the President established a Federal Council on Aging to advise him on the overall aspects of the problem in areas where Federal Government activity seems appropriate. A special staff on aging has been set up in the office of the Secretary of Health, Education, and Welfare. The Surgeon General of the Public Health Service has assigned a small group of staff members to work with state and local health departments on problems of aging, and the Center for Aging Research has been established at the National Institutes of Health to stimulate research activity by university and other groups. It is hoped that a number of large centers attached to universities can be developed during the next few years to undertake interdisciplinary research and training in gerontology. The concept is that such centers would extend outside the parent university to include other educational institutions in the vicinity and other public and private organizations devoted to the furtherance of public health and to the operation of community activities for the older people. The research functions of the centers would be eligible for support from the research grant funds administered by the National Institutes of Health, with the service activities financed from other sources, primarily or entirely non-Federal.

G. Halsey Hunt, M.D.
*Director, Center for Aging Research,*
*National Institutes of Health,*
*Public Health Service, Department*
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## COÖPERATION OF GENERAL PRACTITIONER AND PSYCHIATRIST

One of the interesting and encouraging byproducts of the use of the new "tranquilizing drugs" is the increasing coöperation between the general practitioner and the psychiatrist. More and more patients are leaving the mental hospital and are being referred to their private physician for supervision of the maintenance doses of the drug. Thus the general practitioner is brought more closely than before into touch with the mental patient. Again, he is being approached by nonhospitalized patients with the request that he prescribe one of these drugs, so that he is perforce learning more of the symptoms of anxiety and of its palliation.

Chlorpromazine, reserpine, and their like have been in use in hospitals for about 3 years, and during that time we have learned several facts of interest to the general practitioner.

First, although side-effects are sometimes noted, these are most likely to occur, if at all, during the early months of the patient's stay in the hospital. The most serious of these complications is agranulocytosis. Usually its warning sign is a febrile disturbance or at least indefinite signs of infectious illness not otherwise explained. If a patient receiving a maintenance dose at home should develop such signs, a white blood cell count should be promptly made, and if the count is below 3,000 the drug should be discontinued at once, with appropriate treatment.

Second, it now appears that many (perhaps most) of our patients who have responded to the drugs will probably have to continue indefinitely on a maintenance dose. Some patients do not see the importance of continuing the drug, and it may take one or two relapses to persuade them of the desirability. The family physician can be very helpful, by keeping in contact, in seeing to it that the patient continues his medication. So far as we know, the drugs may be taken for an indefinite period without danger of addiction or other untoward effects, barring the rare late development of sensitivity.

Third, it is now clear that the symptomatic improvement is likely to be rather superficial. Although the patient at first glance may seem well, he may not be basically able to handle the daily problems of living any better than before his illness. Here, understanding and support by the physician and family are important.

At St. Elizabeths Hospital the practice is to notify the family physician when a patient for whom continuing drug therapy is indicated goes on visit and to give him in some detail the course of hospital treatment, together with a recommended maintenance dose.

These drugs have a distinct place in extramural treatment of mental disorders. This is especially true in the care of elderly patients who are irritable, restless and disturbed. Not infrequently such a patient may be cared for at home, whereas without the aid of the drugs it might be necessary to send him to the hospital.

With the increasing development of psychiatric facilities in general hospitals hereabouts (George Washington at present, Washington Hospital Center and Sibley in the not-too-distant future) and with the growing realization of the usefulness of the "tranquilizers," the general practitioner is being steadily drawn closer to the care of psychiatric problems. His aid and coöperation are not only valued by the psychiatrist; they are essential if the patient is to be given the care he deserves.

W. O.

## DIABETES MARCHES ON

Even though we in medicine are always looking forward and trying to foresee the future as it may affect the health of our patients in particular and the public in general, it is not amiss to take an occasional look backward to see what we have already accomplished. Certainly we can look back with great pride and satisfaction on what has been done, particularly in the past 15 years, since the beginning of World War II. No matter in what specialty one searches, great strides in diagnosis or treatment or both can be cited with relative ease, and in some cases we have even put ourselves "out of business," so to speak. One no longer sees mastoiditis with nearly the frequency as before the War, due, of course, to the use of antibiotics early in the course of upper respiratory infections. Even the once common myringotomy is rarely, if ever, resorted to. Robert Koch would surely shake his head in disbelief if he were told that one of our largest tuberculosis sanatoriums was closed recently due to a lack of patients.

Those of us who are particularly interested in diabetes are also proud of the changes that have been brought about in this area of endeavor. It is a well known fact that a patient can be admitted to a hospital for a completely unrelated disease and found to have diabetes. This is one of the principal reasons for the standard procedure of 'routine urinalysis.' It is also known that the earlier a diabetic is diagnosed, the easier it is to treat him, the longer he can go without insulin, and the less likely he is to develop degenerative changes. In 1947 Dr. Hugh L. C. Wilkerson[1] of the United States Public Health Service concluded, by means of random urinalyses and follow-up blood sugars of the population at large, that there were approximately 1,000,000 persons in this country who knew that they had diabetes, and a like number who had diabetes but who did not know it! As a result of these facts, the American Diabetes Association decided in 1948 that the ideal approach to the detection of the 1,000,000 unknown diabetics would be the random testing of the urine of the general public every year, and that the best method to carry out such a vast program would be through a detection drive one week each year during which the public would be invited to have their urine tested for sugar at no cost. This program, now known as the Diabetes Detection Drive, is conducted annually on a national basis, usually during the second complete week in November. This year we are preparing to launch our Tenth Annual Drive.

As a result of these Drives, a new 'chief complaint' has been introduced into the practice of medicine: "I was found to have sugar in my urine in the Diabetes Detection Drive." The onset of diabetes with the classic symptoms of weight loss, frequency, thirst, polyphagia and impotence is now less frequent, and the onset with true diabetic coma is extremely rare. We believe that this has been brought about in great measure by the Diabetes Detection Drives.

Naturally, the mere finding of glycosuria is not the ultimate aim of the Drive, but rather the detection of the patient with diabetes. It is this gap which must be filled in by the family physician, and his role is an extremely important one in the chain of events. Each glycosuric individual discovered by the Drive is sent a notice to this effect, and his physician is also notified that sugar was found in the urine. It is our fervent hope that each physician who receives such a notice will see to it that the patient is properly evaluated either by means of a 2-hour postprandial blood sugar, or a glucose tolerance test. It is disappointing that this last vital link is frequently broken either by the patient, who completely disregards our notice to report to his physician, or by the busy practitioner, who fails to carry out a complete follow-up study of the patient or sometimes just repeats a fasting urine and dismisses the entire matter from consideration if no sugar is found!

We realize that about 40 to 50 per cent of the glycosuria found in the random specimen will not be diabetic, but similarly, many growths examined in the office will not be cancerous, a number of chest X-ray films taken because of chronic cough will be normal, and a large number of electrocardiograms taken because of chest pain will not show an infarction. In the last analysis it must be remembered that this is the most practical method of finding the 'unknown' diabetic, and all of this must be explained to the occasional patient who complains about having a blood test done needlessly. We therefore urge that each glycosuric patient be considered diabetic until proven otherwise, rather than the converse. Each individual with glycosuria should be made to report for a blood sugar test taken 2 hours after a heavy carbohydrate meal. If this is found normal, then no further search is necessary. If the postprandial blood sugar is questionable, a glucose tolerance test should be done before the patient is dismissed. Only with this type of coöperation from every physician can the Diabetes Detection Drive "march on" to the goal of finding the 1,000,000 unknown diabetics.

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[1] WILKERSON, H. L. C., AND KROLL, L. P.: Diabetes in a New England town; study of 3,516 persons in Oxford, Mass. J.A.M.A., 1947, **135**, 209.

Aaron G. Saidman, M.D.
*Chairman, Clinical Section,*
*Diabetes Association of the District of Columbia; Chairman, 1957 Diabetes Detection Drive*

# In and Out of Focus

BY THE OBSERVER

### *Medical Council Organized*

"Recent developments indicate the need for a closer relationship between the District Medical Society and county medical societies situated within the Washington Metropolitan Area in Maryland and Virginia. How this can best be effected deserves the thoughtful and immediate consideration of these organizations.

"Paralleling an unprecedented growth in the population in the Metropolitan Area since 1940 has been a comparable increase in the number of physicians in private practice. In Washington alone there has been at least a 70 per cent increase since the close of World War II. While official figures are not available, your Observer is under the impression that this percentage has been exceeded in Montgomery and Prince Georges Counties, in Maryland, and in Arlington and Fairfax Counties and the City of Alexandria, in Virginia.

"In the light of these developments it is not surprising that misunderstandings have occurred between the above medical groups which might have been avoided if there had been a closer association. . . ." (In and Out of Focus, January 1951)

An example of the urgent need for what your Observer proposed should be called the Medical Council was the differences which had arisen in adjacent counties within the Metropolitan Area, particularly in Virginia, over the operation of the Society's prepayment plan, Medical Service of the District of Columbia. These differences, he said, were not the result of intentional affronts by the organizers of the Service but were due to the fact that those responsible for the conduct of the Service were so occupied with internal problems that they had overlooked the impact of the Service on non-District physicians.

As your Observer conceived the Council, it would be a voluntary body to which representatives would be appointed by each of the medical societies in the Metropolitan Area. It would consider matters of mutual interest to all participants and, if authorized to do so, undertake Area-wide programs. No program would be undertaken by the Council until the subject under discussion had been reviewed and favorably acted upon by all participating medical societies.

The proposed Council was approved by the Executive Board, which was convinced that its organization would be advantageous to everyone concerned. The proposal was also well received by the various county medical societies. However, in one county society there were indications that its officials were not too friendly to the idea and it was thought best to postpone organization of the Council until a more propitious time.

In the 6 intervening years, no further steps were taken. Among the reasons for the prolonged inactivity were the previously mentioned decision to await a better climate in which to bring the Council into being and the increasingly heavy demands made upon the Society due to the growth of its membership.

The Medicare Program contributed more than anything else to the revival of the Council idea. Requests received from nearby county medical societies, within the Metropolitan Area, to become co-signers with the Society in its agreement with the Department of Defense emphasized the need for some sort of an organization, informal though it might be, for the purpose of exchanging information and coming to an agreement on matters of mutual interest.

Your Observer discussed this situation with Dr. Ralph M. Caulk, President of the Society, who agreed that this was the proper time to extend an invitation to the presidents of all nearby medical societies for the purpose of discussing the advisability of organizing the proposed Council. Response to the invitation was prompt and encouraging. All but one of the societies in the Metropolitan Area were represented at a dinner on January 29, 1957. Everyone present was favorably disposed to the establishment of the Council—in fact, enthusiastically so. It was, in every respect, a satisfactory meeting. As a result of the discussion, the following points were agreed upon:

1. There is an urgent need for the proposed organization and the medical societies represented should be encouraged to participate.

2. The name of the organization shall be the Medical Council of the Washington Metropolitan Area.

3. The Council's activities shall be limited to discussions of problems of mutual interest, and recommendations; in other words, the participating medical societies will not be governed by the actions of the Council. The Council will vote on matters before it, with the understanding that all of its actions are subject to ratification by the organizations represented.

4. Membership in the Council shall consist of 3 representatives of each organization, i.e., the President, the Past President, and the President-elect. Invited to meetings of the Council shall be the executive secretaries of the organizations which employ them.

5. Officers shall consist of Chairman, Vice Chairman and Secretary, to be elected at the first meeting following the decision of all medical societies in the Area to participate.

6. Meetings of the Council shall be held 3 times a year at 4-month intervals, unless otherwise called by the Chairman or requested by 3 or more members of the Council.

7. Regular meetings of the Council shall be held at Washington hotels, as they are the most centrally located in the area. These meetings shall be preceded by a dinner, each group paying its share of the cost.

Since the above meeting, communications have been received from all of the medical societies in the Metropolitan Area stating that their organizations had voted to participate in the Council. This was good news indeed. Your Observer is confident that the Council will do much to create a better understanding and bring about a greater unity than has heretofore existed.

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### *IV. Committees*

A skillful and imaginative writer could compose an interesting story about the activities of the Society's committees. One should perhaps qualify this statement to the extent that the author would have to be selective, for, obviously, not all committees lend themselves to an interesting narrative. That is not to say that they are unimportant. For example, the Program Committee has a very important job to do; in fact, its assignment is the most vital of all for

DINNER FOR THE PRESS AT THE WASHINGTON HOTEL

On Tuesday evening, March 5, the Medical Society's Committee on Public Information was host to the Washington press at a dinner at the Washington Hotel, which was held for the purpose of discussing matters of mutual interest. In the central panel, top, is Dr. George Maksim (left), Chairman of the Committee, engaged in pleasant conversation with Dr. Edward J. Stieglitz and Nate Haseltine, of *The Washington Post and Times-Herald.* In the panel to the left of Dr. Maksim are (left to right): Charles Brooks, of *The Evening Star*; Dr. Robert Day, and Norman Reed, Program Director, WWDC. To the right of Mr. Haseltine are Edward F. Ryan, Director of News and Public Affairs, WTOP, and at the extreme right, Gerald G. Gross, Editor and Publisher, *Washington Report on the Medical Sciences.*

Beginning at the left and clockwise around the table are: Mr. Ryan, Mr. Gross, Miss Cornelia Ball, *Daily News,* Dr. Robert Stolar, Mr. Brooks, Dr. Day, Mr. Reed, Theodore Wiprud, Secretary and Executive Director of the Medical Society, Dr. Maksim, Dr. Stieglitz, Mr. Haseltine, Dr. Joseph H. Watson, Louis Cassels, United Press, Ben Gilbert, City Editor, *The Washington Post and Times-Herald,* Dr. Alan F. Kreglow, and Coit Hendley, Assistant City Editor, *The Evening Star.* Not shown is Frank Carey, Associated Press, who came in too late for the picture but took part in the conference.

it is directed at the very heart of the Society's reason for being—"the promotion of the science and art of medicine." Yet, the fact remains that there is little drama or novelty in what this Committee does. Its responsibilities are largely that of planning and presenting scientific programs which will keep the profession abreast of medical progress. It is a task which has been carried on with more or less success by medical societies ever since they came into existence.

There are, of course, other committees in more or less the same category. They, too, have important jobs to do but a recital of their activities would not make exciting reading to most people, including physicians. Here is a list of these committees and reasons for their existence:

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|---|---|
| Public Health and its Subcommittees on Child Welfare, Diseases of the Chest, Maternal Welfare, Venereal Diseases, and Diabetes | Initiate and carry on studies and activities in the field of public health. |
| Cancer Control | Coöperates with the D. C. Division of the American Cancer Society with respect to the manner and method of disbursing funds in the District |

| | |
|---|---|
| | of Columbia. Investigates and recommends methods for the "control" of cancer. |
| Medical Education Fund | Stimulates contributions to American Medical Education Foundation. |
| Public Policy | Reviews and recommends action by the Executive Board and the Society with respect to legislation. Concerns itself with all community problems of a general nature. |
| Public Information | Disseminates suitable information concerning medical and hygienic matters among the public via press, radio, TV, etc. More recently has devoted itself to the improvement of professional relations. |
| Industrial Health | Supervises all matters pertaining to industrial medicine. Examples: Prepares for the Society's approval Workmen's Compensation Fee Schedule; adjudicates complaints in industrial medical field lodged by physicians against insurance companies and vice versa. |
| Professional Liability Insurance | As the name implies, is concerned with problems arising in the controversial field of malpractice. |
| Coöperation with the D.C. Bar Association | Meets and deliberates with a similar committee of the Bar Association and acts on matters of a medico-legal nature. |
| Veterans' Affairs | Devotes its attention to medical service for veterans and related matters. |
| Classification | Classifies physicians according to type of practice in accordance with the rules laid down by the Society. |
| House | Supervises the Society's property. Recommends "any improvements, extensive repairs or changes in the property" which it deems necessary. |

Among the committees which currently possess "story-interest" are:

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|---|---|
| Blood | Coöperates with the D.C. Chapter of the American Red Cross in the conduct of the Regional Blood Bank. Medical and human interest incidents abound in its activities. |
| Mental Health and Subcommittee on Alcoholism | Public officials lean heavily for advice on these committees. Nation-wide interest in mental health makes them a "natural" public-interest-wise. |
| Medical Care | Primarily concerned with social and economic aspects of medicine. Its activities have had a profound effect on medical care in the District, but its "story" remains to be told. |
| Grievance | Receives and adjudicates complaints. This is the "complaint department" and a busy one it is. Obviously, it has an interesting if difficult assignment. |
| Medical Ethics and Professional Conduct | Acts as a review body, handing down opinions in its field which may have deep significance for the medical profession in the District. This is a comparatively new committee and is, therefore, just getting under way. |
| Emergency Medical Service of the Washington Metropolitan Area | Hindered by apathy of public officials, the public itself, and physicians, this committee has doggedly and successfully persisted in preparations to cope with a community disaster from whatever cause. |
| Traffic | Actively coöperates with the District's Department of Vehicles and Traffic. One of the Society's busiest and effective committees rendering an important public service. |
| Medical Bureau | Supervises the conduct of the Society's telephone answering service. A surefire source of "story" material. |

Not included in the above list are a few special committees rendering invaluable service to the organization. In this group are committees on the Health Department Budget, Hospital Regulations, and the Commission on the Reorganization of the Medical Society; also the various committees responsible for the ANNUAL SCIENTIFIC ASSEMBLY.

Some readers of this column may feel that the activities of committees listed as having current "story" interest are ill-chosen and that not all those mentioned in the essential but routine category should come under this heading. That may well be; however, your Observer hastens to point out that a committee which is in one category this year may be in another the next.

Whatever the readers' views on the subject may be, if these observations serve in some degree to bring home to members the important contributions made by the majority of the committees of the Society, they will have served their purpose. After all, the committees are the sinews and muscles of an organization. Without healthy, vigorous committees, our Society would be flabby and ineffectual indeed.

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### *The Davidson Award*

On Sunday, April 14, 1957, a number of our members paid their respects to Dr. Edward Young Davidson on the occasion of his 96th birthday, which actually occurred 4 days earlier. Born at the beginning of the Civil War in Petersburg, Virginia, Dr. Davidson received his degree in medicine from Columbian University (now George Washington University School of Medicine) on May 5, 1894. Licensed in 1897, he has carried on a general practice in the District of Columbia for nearly 60 years.

Longevity and his many years in medical practice, however, are not what distinguish Dr. Davidson's career the most. The contribution for which he will always be remembered and a monument to his courage and vision are to be found at 1718 M Street, N.W. More than any other physician, he was responsible for the construction of the Society's building. On a number of occasions, his persistency in seeking funds for this purpose tried the patience of his colleagues, but his singleness of purpose would not be denied. There were, of course, others who gave generously of their time and money, but he was the driving force which made the building possible.

In recognition of Dr. Davidson's devoted service, the Society, on May 1, 1929, voted to establish The Davidson Lecture. Under the rules governing the choice of the Lecturer, the selection was made on the basis of competition, the winning essay being chosen by a subcommittee of the Executive Board, consisting of 5 members. The competition was open to all physicians or other scientists working in the District of Columbia. On the second Wednesday evening in October, in alternate years, the winner read his essay at a Society meeting. The award consisted of the increment from a fund contributed by members and a certificate.

In the early years, the Lecture created considerable interest and quite a number of essays were submitted in competition. These dwindled as the years passed until, recently, few have been received from which to make a choice. Attendance also became so poor that it did not justify devoting an evening to the Lecture. Subsequently, it was planned to make the Lecture a part of the ANNUAL SCIENTIFIC ASSEMBLY program. This was abandoned because the highly technical nature of some of the essays made them unsuitable for presentation at this meeting.

On February 25, 1957, the Board adopted the proposal that the Davidson Lecture give way to the Davidson Award, to be given the author of the best paper published in the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA in the preceding year. The method of choosing the recipient had not yet been decided upon when these lines were written. The important thing is that the Board's action gives assurance that the memory of Dr. Davidson's contribution to the Society will be perpetuated in the Davidson Award.

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### *Human Factors in Automobile Accidents*

An unusually interesting and timely reprint from the *New York State Journal of Medicine* for December 15, 1956, came across your Observer's desk recently. The subject matter was a Symposium on the Medical Aspects of Motor Vehicle Accident Prevention.

If space permitted, much of what was said by participants in the Symposium might profitably be included in this column. Especially challenging was the address, near the close of the program, by Drs. John MacIver and William P. Shephard, of New York City, on the "Human Factors in Accidents."

In introducing their subject, the speakers said:

> "The one thing heard most frequently in this Symposium has been our lack of knowledge concerning safety. This is especially true of the human factors involved. It is indeed a basic difficulty. Our nonmedical colleagues sometimes tend to believe that the examining physician has some magic for identifying and remedying the numerous human factors involved in accidents. Performance characteristics can readily be drawn up for machines but not so easily for men. We know far too little about variations in human performance both in health and disease; indeed, even the demarcation between health and disease is often blurred."

Admitting that in some organic areas of human function, such as in the special senses of the eye and the ear, progress has been made, "most areas of human function are not yet sus-

THIRD LUNCHEON ROUND TABLE FOR MALPRACTICE DISCUSSION

The physicians shown above are attending the Medical Society's Third Luncheon Round Table, sponsored by the Committee on Professional Liability Insurance. In the center of the top panel (right) is Dr. Robert E. Moran, Chairman of the Committee, who led in a discussion of "The Prevention of Malpractice Claims." Flanking him (left and right) are Dr. William W. Chase and Dr. Morris Chase. The other group at the top are Drs. Frederick W. Coe, H. Lynn Colvin, Fred O. Coe, and Robert D. Cawley. The luncheon was held in the Medical Society's Library on February 28.

ceptible to precise measure at least by present day methods." A great amount of basic research is needed if effective administration and educational programs are to be carried out.

Human factors—physical, psychologic, social and cultural—contributing to accidents are described by Drs. MacIver and Shephard as follows:

"Individual physical differences are generally quite obvious. The agile 3-year-old, the strapping young male, the presbyopic oldster—all have physical characteristics that carry different types of accident potential. Comparisons may be made on many bases: age and sex variations, variations under physical stress, variations determined by organic impairment or drugs or climate. The list is virtually endless, and it will take all the ingenuity of many investigators to choose the right leads and to come up with applicable answers.

"What of psychologic—or emotional or personal—characteristics? Regretfully, we must lay to rest any oversimplified concept of the accident-prone individual and, indeed, mix hope with skepticism that the more neutral term of 'accident-repeater' will lead to usable conclusions. This does not imply that the accident-prone individual does not exist. He probably does. Unfortunately, however, we have not been able to isolate him with any consistency. Neither are there usable yardsticks of accident-proneness nor measures of the degree of stability of this quality. Accidents have the characteristics of being relatively infrequent phenomena; of being determined by multiple, not single, factors and in the main determined by more than one person—all this in a constantly shifting environment. The fact is that accident-proneness has not hurdled the barriers that these characteristics symbolize.

"This should not suggest that the investigation of transient and permanent emotional patterns is not warranted. There is wide agreement among psychiatrists that *Homo sapiens* comes equipped with aggressive drives, mostly benign—indeed helpful—but also frequently destructive to the individual and those around him. To understand both the healthy and the malignant emotional patterns, how they operate, in whom, when, and to incorporate the findings within a logical overall theory of accident phenomena will be a great accomplishment indeed. It is hardly necessary to add that such an accomplishment will not come about overnight. The answers, as most of the answers involving human behavior, will come slowly and piecemeal.

"Now to the third category—that of social factors. There can be found in human society a great many identifiable groups. We may define a group simply and broadly as being made up of people who have something in common. Particular groups may have homogeneous or heterogeneous memberships; individual roles and status may vary; in many groups the individual has superiors, peers, and subordinates. This concept of the societal group has importance in accident research because intergroup and intragroup relations undoubtedly affect the frequency and type of accidents. For example, what of the position of the adolescent in our society and the accidents he incurs? Likewise, what of the group of 65 years of age and older? What societal characteristics of the American family have relevance to accidents within and without the home?

"Last, we come to the influence of our culture. Not only is a man a social animal, he is a culture-bearing animal as well. He shapes and is shaped by his institutions, customs, beliefs, and attitudes. Here is an almost entirely unexplored field for accident investigation. Two examples: Can the American's attitude toward his automobile be modified in such a way as to reduce the accident toll on the road? What part does the contemporary male's mode of expressing his masculinity play in the production of home accidents?"

Drs. MacIver and Shephard sum up their views of the situation with the following:

"What makes human beings tick? Why do they behave the way they do? Indeed, we have come to the conclusion that those who are in accident research must face questions as large as this. We can assure them that the search for answers will be as exciting as any in the entire world of scientific endeavor."

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### *Complaints—How to Make Them*

"All of us from time to time believe we have reason to complain about some action adopted by medical organizations to which we belong. But often we have not taken the time to inform the officers of this association of what we believe. In most medical organizations . . . the officers are elected or appointed in a way which permits the membership to exercise some influence. Thus we can adopt the attitude that these men are elected by us to represent us, but they cannot represent us unless we tell them what we want. Nor can we blame them for their actions if we remain silent. We can only blame ourselves. But when we express our-

(*Continued on page 222*)

## PROCEEDINGS OF MARCH BUSINESS MEETING

In the absence from the city of President Ralph M. Caulk, Dr. Irving Burka, First Vice President, presided at the Business Meeting, March 6, which is held annually for the purpose of nominating new officers of the Society and to transact any necessary business prior to the regular Annual Business Meeting in May.

A year ago, according to instructions voted upon at the March Business Meeting, a Study Commission was appointed by the President for the purpose of reviewing the operation of the Society since it was reorganized in 1939 and the manner in which it now functions. The report of this Commission was read by its Chairman, Dr. William P. Herbst, Jr.

At a special Business Meeting on October 30, 1956, the Society directed the House Committee to employ an architect to submit detailed plans to remodel the building at 1710 M Street, N.W., and to obtain bids. How well these instructions have been carried out was related to the Society in a carefully prepared report submitted and read by the Chairman of the House Committee, Dr. William Ross Morris.

The two reports mentioned above as well as the Interim Report of the Executive Board of the Society, presented by its Chairman, Dr. Wallace M. Yater, were accepted in their entirety by the membership. All three reports are published herewith following this brief account of the proceedings.

Dr. Frank D. Costenbader, Chairman of the Nominating Committee, was asked to submit the nominees for new officers of the Society, which are listed on page 200. No additional nominations were made from the floor.

Following the business session, a motion picture on medicine and the law entitled, "The Medical Witness," was presented as an educational feature.

## INTERIM REPORT OF THE EXECUTIVE BOARD

This report reflects the considerable increase in the activities of the Society, and the number and variety of problems with which your Executive Board must deal. As has been repeatedly stated in similar reports at the March Business Meeting only the most important business, or what might be described as matters of "general policy" have been included. A complete review of activities and actions during the organization year will be submitted to the membership prior to the Annual Business Meeting which, this year, will be held on May 1, 1957.

*Honorary Membership Proposed for Dr. Leroy E. Burney.* At its meeting on December 4, 1956, the Executive Board voted to propose Dr. Leroy E. Burney, Surgeon General of the Public Health Service, for Honorary membership. Dr. Burney succeeded Dr. Leonard A. Scheele, who is also an Honorary member.

Dr. Burney is a graduate in medicine of Indiana University (1930). He studied under a Rockefeller Fellowship at Johns Hopkins University School of Hygiene and Public Health from 1931 to 1932, receiving a degree of Master of Science in Public Health. His service in the Regular Corps of the Public Health Service began in 1932.

During the War, Dr. Burney was detailed to the Navy and sent overseas by the War Shipping Administration for the purpose of determining the most effective measures for the control of communicable diseases. He was also on detail from the Public Health Service from 1945 to 1954, when he served as Secretary and State Health Commissioner of the Indiana State Board of Health. He came to Washington in 1954 as Assistant Surgeon General and Deputy Chief of the Bureau of State Services, Public Health Service.

As required by the Constitution and By-laws, this proposal will be referred to the Board of Censors for approval and submitted to the Society for a vote at the Annual Business Meeting.

*Joint Resolution Adopted by the Sections on Pathology and Laboratory Medicine and Otorhinolaryngology.* The above Sections adopted the following resolution, submitting it to the Executive Board for approval at its meeting on May 28, 1956:

> "*Be it resolved*, That after due consideration by the membership of the Section on Pathology and Laboratory Medicine and the Section on Otorhinolaryngology that the following information recorded on the chart of a patient admitted for tonsillectomy and adenoidectomy be considered adequate: Under the History, the questions of a familial history of bleed-

ing or previous personal history of bleeding should be answered. Under the Physical Examination, the condition of lymph nodes, liver, and spleen should be reported. There should be a note as to whether or not abnormal masses are present and if there is any eruption on the skin or evidence of bleeding or bruises.

"It is further recommended that the following examinations be routinely made and considered adequate if no abnormalities are found: hemoglobin estimation, examination of stained blood smear to estimate relative numbers of leukocytes, and noting any abnormalities of these cells or erythrocytes, along with an estimation of the adequacy in the number of platelets. Any evidence of a bleeding tendency noted when obtaining blood should also be recorded. A routine urinalysis is also necessary."

The Board voted to endorse the resolution in principle because it "aims to improve the standards of medical care and provide proper safeguard for patients." It recommended that the Sections submit the standards contained therein for adoption by the medical staffs of the various hospitals.

Subsequently the resolution was reviewed by the Society's legal counsel, Mr. Warren E. Magee. It was his opinion that the procedures proposed would in effect set up minimum standards which, if not adhered to, would encourage malpractice suits. He, therefore, suggested that they be recommended to hospital staffs rather than formally submitted for adoption. In the light of counsel's opinion, and changes in the language suggested by Attorney H. Mason Welch, the Board, at its meeting on December 4, 1956, rescinded its action endorsing the resolution and referred the matter back to the Sections for reconsideration.

Since that time, the Board has been informed by the Section on Otorhinolaryngology that it has posponed indefinitely further consideration of the resolution. No report has yet been received from the Section on Pathology and Laboratory Medicine.

*Endorsement of Lions' International Eye Bank and Research Foundation.* This project, which in the Washington Metropolitan Area will be sponsored by the Lions' International Clubs, was endorsed by the Section on Ophthalmology and referred to the Executive Board for its approval. The Board was favorably impressed with the possibilities and the philanthropy of this undertaking, and unanimously approved the Section's action.

The Board also voted that 3 physicians representing the Society, chosen by the Section, be appointed to the Medical Advisory Board, which it is understood will be composed entirely of doctors of medicine.

*Group Life Insurance for Society Members.* This proposal was submitted for the Board's consideration by Dr. Richard H. Todd, formerly Chairman of the Special Committee on Insurance. The Committee, which is no longer in existence, was responsible for the selection of Mutual Benefit of Omaha as carrier for group accident and health insurance coverage for Active members of the Society.

The Board was favorably impressed with Dr. Todd's communication and statistical data enclosed, and voted to appoint a new Committee on Insurance to investigate and submit its recommendations as regards the suggested program. Appointed to this Committee were: Dr. Philip H. Philbin, *Chairman*, Dr. Paul F. Jaquet, Jr., and Dr. Frederick B. Brandt.

It is hoped that the Committee will submit its findings and recommendations in time for the Board to incorporate them in its final report at the Annual Business Meeting.

In this connection it might be well to point out that the Board, at its meeting on October 22, 1956, instructed the Secretary to poll the membership of the Society in an effort to determine how many of them would be interested in participating as a group in Medical Service of the District of Columbia if afforded an opportunity. The result of that poll was as follows:

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|---|---|
| Affirmative | 220 |
| Negative | 109 |
| Not at this time | 1 |
| Already covered | 1 |
| Undecided | 1 |

*Nomination of Vice President of Washington Academy of Sciences.* Most members are familiar with the fact that Dr. Frederick O. Coe has represented the Society as Vice President of the Washington Academy of Sciences for several years. He has been an able representative and the Board has nominated him to succeed himself in this office.

*Annual Financial Report for 1956 and Estimated Budget for 1957.* [Space limitations will not permit the publication of the Report and the Budget. Members who are interested and could not attend the Business Meeting at which they were presented can obtain copies by calling the Society's office.]

*Summary of Membership for 1956*...shows that the total membership which, in January 1, 1956, was 2,035, had increased by the end of the year to 2,087. It will be noted that the largest increase was in Associate members, 480 to 510, and the smallest in Active members, 1,421 to 1,429, which would suggest that the Society's Active membership is leveling off.

*Nominations to Board of Trustees of Medical Service.* It is incumbent upon the Society, prior to the annual meeting of Medical Service of the District of Columbia, which is to be held in April, to nominate its representatives to the Service's Board of Trustees. This year the Society must submit the names of 3 nominees to succeed the following, whose terms expire: Drs. Frank D. Costenbader, Henry L. Darner and Edgar M. McPeak.

Dr. Costenbader has stated that he cannot accept renomination, for personal reasons. The Board regrets his decision very much as he has given outstanding leadership to the Service, not only as a member of the Board of Trustees, but as its President. He was also Chairman of the Committee on Medical Care which was responsible for the planning and inauguration of the Service. The Society owes Dr. Costenbader a deep debt of gratitude and the Board, at this time, wishes to express its appreciation.

After careful consideration, the Board has decided to submit for the Society's approval the nomination of the following: Dr. Ernest A. Gould to succeed Dr. Costenbader, and Drs. Henry L. Darner and Edgar M. McPeak to succeed themselves. The latter have indicated that if their nominations are confirmed by the Society they will be glad to continue in office. The Board hopes that these nominees will meet with the Society's approval.

So that there will be no misunderstanding as to the action taken at this meeting, it should be understood that the Society nominates its representatives on the Board of Trustees but does not elect them. The nominees chosen at this meeting will be voted on by the Participating Physicians in Medical Service at its annual meeting, when election of officers takes place.

*Appointment of Member to Board of Trustees of Group Hospitalization, Inc.* There are few assignments of greater importance to the Society's membership than this one. Your Board is of the opinion that its representatives on the Board of Trustees of Group Hospitalization have given an excellent account of themselves. Dr. Howard P. Parker is one of the newer members of the Board representing the Society. He has served faithfully and well. Your Board takes pleasure, therefore, in recommending his reappointment for a 5-year term, beginning in March, 1957.

*Resolutions Adopted by the Sections on Pathology and Laboratory Medicine, Radiology, Anesthesiology, and Physical Medicine, re Payment of Physicians in These Specialties under the Medicare Program.* All of these resolutions have a common objective—that the services of physicians in their respective fields are engaged in the practice of medicine and that fees for their services under the Medicare Program, wherever rendered, be paid to the physicians rendering such services. The phraseology of the resolutions with respect to these objectives varied so little that their incorporation in this report did not seem justified.

The Board, at its meeting on January 28, 1957, approved the resolutions and voted that copies be sent to Major General Paul I. Robinson, Office of the Surgeon General of the Army, representing the Department of Defense. Subsequently copies were sent to the offices of Medical Service.

At a more recent meeting, held on February 25, 1957, representatives of the above Sections appeared before the Board to request that a memorandum be sent to the members of the Society outlining the procedure which would "expedite the management of patients eligible under the [Medicare] contract to receive these medical services." The objective here was the same as set forth in the resolutions—that all physicians, regardless of specialty, be paid directly for services performed in connection with the Medicare Program.

*Review Committee for the Medicare Program.* Where differences arise over payments for services rendered under the Medicare Program they will be referred to this Committee for review and its recommendations. For the information of the membership, the following have been appointed members of this Committee: Dr. Leo B. Gaffney, *Chairman*, Drs. Stafford W. Hawken and William K. Billingsley, Jr.

*Membership in U. S. Chamber of Commerce.* On several occasions in recent years the Society has been called upon by the representatives of the U. S. Chamber of Commerce, who have urged that the Society affiliate itself with that organization. No action had been taken, largely because of the cost of membership. Dues for participating groups, such as the Society, were reduced this year to a nominal amount, $100. In this situation, the Board decided that it was in the best interests of the Society to become a member, and voted at its meeting on January 28, 1957 to apply for membership. As a member organization the Society is entitled to an official representative, known as its National Councillor to the Chamber. Your Board has chosen Dr. J. Ross Veal for this office.

*Poliomyelitis Vaccination Program.* At a recent conference on poliomyelitis prevention, held at the AMA headquarters, in Chicago, the Society was represented by Dr. Preston A. McLendon, who reported that all state medical societies had been requested to participate in a Nation-wide campaign, the purpose being to vaccinate all persons of all ages against poliomyelitis.

The Board unanimously endorsed the Society's participation and established a Committee on Poliomyelitis. The following members of the Society were appointed to the Committee, which is now actively engaged in developing the program for the District of Columbia: Dr. Montgomery Blair, *Chairman*; Dr. Daniel Leo Finucane, *Co-chairman*; Drs. William S. Anderson, W. Montague Cobb, Milton C. Cobey, Herbert S. Gates, Milton M. Greenberg, Michael J. McInerney, Preston A. McLendon, and Robert B. Nelson Jr.

*Election of Nominating Committee.* The following members were elected to the Nominating Committee in accordance with rules adopted by the Society: Dr. Frank D. Costenbader, *Chairman*; Drs. Frederick O. Coe, J. Keith Cromer, O. Hugh Fulcher, John L. Parks, R. Lomax Wells, and Jonathan M. Williams.

Dr. Costenbader, Chairman of the Committee, will submit nominees for offices for the coming year following this report.

*Recommendations of the House Committee.* You have had presented to you the recommendations of the House Committee with respect to remodeling 1710 M Street, N. W. The Board concurs and urges their approval.

Their acceptance will provide additional office space and meeting rooms, which are badly needed. The total investment is not too great considering the work that will have to be done and the Society's financial situation.

*Selection of Representatives to Hospital Service Agency of the National Capital Area, Inc.* Inadvertently this item was overlooked and not included in the agenda. The following are proposed as representatives of the Society to HSA for another year: Drs. William H. Beard, C. Willard Camalier, Jr., Oscar B. Hunter, Jr., Henry C. Macatee, Margaret M. Nicholson, and Frank S. Pellegrini.

*Conclusion.* Unless some emergency should arise, the next meeting at which business of the Society will be considered will be the Annual Business Meeting, which, as previously stated in this report, will be held on May 1, 1957.

The Committee on Arrangements for the 26th Annual Scientific Assembly has just announced that the Assembly is scheduled to be held at the Hotel Statler on October 14, 15, and 16, 1957. The theme for this year is "World Medicine" and the program as outlined to date promises to be one of the finest in the Assembly's history.

## NOMINATIONS

The Nominating Committee presented the following nominees for elective offices at the business session of the Medical Society of the District of Columbia on March 6, 1957.

*For President-elect:*
W. Leroy Dunn

*For First Vice President:*
Aubrey D. Fischer

*For Second Vice President:*
Dorothy B. Holmes

*For Member of Executive Board for 4 years:*
Ralph M. Caulk

*For Member of Board of Censors for 3 years:*
W. Robert Perkins, Jr.

*For Delegate to American Medical Association for 2 years:*
Victor R. Alfaro

*For Alternate Delegate to AMA for 2 years:*
Edward W. Nicklas

Elections to the above offices will be held at the Annual Business Meeting of the Society, May 1, 1957.

# REPORT OF THE STUDY COMMISSION ON REORGANIZATION OF THE MEDICAL SOCIETY

At a regular business meeting of the Society held on March 7, 1956 the following motion was adopted: "That the President appoint a Study Commission consisting of 7 members to consider the reorganization of the Society and report [its findings and recommendations] at the business meeting in March 1957."

Shortly after the above action was taken, the President of the Society appointed the Commission, consisting of the members who have signed this report. The Commission held its first meeting on November 8, 1956. At that time it reviewed the recent history of the Society and the manner in which it now functions. Another meeting was held on February 1, 1957 for the purpose of further considering the operation of the Society and how, in the Commission's opinion, it could be improved.

The point was made when the above motion was adopted that there was a need for a closer relationship between the Society and its members. It was suggested that it could be reorganized in such a way that the Society's policies would be determined by a larger and more representative body of members; that this might best be accomplished if members were elected on a precinct basis. In the light of this proposal, it is perhaps well to first review the recent history of our Medical Society and how it came to be organized as it now is.

## Reorganization in 1939

The years 1937 and 1938 were critical ones for our Society. It was in the latter year that the organization became a joint defendant with the American Medical Association in anti-trust litigation. As those of you who were members at that time will recall, the Society was not only burdened with difficulties from without, but rent by controversy within.

Its affairs at that time were under the direction of what was known as the Executive Committee, consisting of some 30 members. In the face of the serious situation which then existed it was imperative that the Committee take prompt and considered action in an effort to protect the Society's interests. However, because of its size and the divergent and irreconcilable views of its members, the Society's welfare was seriously jeopardized.

Sensing the seriousness of the situation, the Society finally voted to reorganize the Committee and in doing so amended the Constitution and By-laws to provide for the establishment of the presently constituted Executive Board. The Board began functioning in July 1938 and has carried on with apparent satisfaction to the membership ever since. It consisted then, as it does now, of 7 members; 4 are elected, 1 of whom is elected in May of each year to hold office for a term of 4 years. Other members of the Board are the President, President-elect and Senior Delegate to the American Medical Association.

On January 9, 1939 the present Constitution and By-laws was adopted. Specified in considerable detail were the duties of the Board. In view of their pertinence to the subject under discussion, the Study Commission has included the following portions in its report:

> "Article II, Section 1. The Executive Board shall carry on the ordinary business of the Society with all of the powers of the Society itself, subject to the Constitution and By-laws, and to the action of the Society at any regular or special meeting.
>
> "Section 2. Wherever a matter of general policy is involved, whether originating in the Executive Board or referred to it by the Society, the question shall be submitted to the Society as a whole for action with the recommendation of the Executive Board, and the membership shall be notified of said question in the usual manner.
>
> "Section 3. All committee appointments by the President shall be subject to confirmation by the Executive Board.
>
> "Section 4. The Board shall have charge of the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA (i.e., the official publication of the Society) and shall appoint the editor, associate editors, and managing editor of said publication, from time to time, for such term as the Board deems best.
>
> "Section 5. At each business meeting, the Chairman of the Board shall inform the Society of the matters considered by the Board and the disposition thereof during the period prior to said meeting and subsequent to the last report, so that the Society shall be kept fully informed at all times of the activities of the Executive Board.
>
> "Section 6. The Chairman of the Board shall make an annual report in writing of the activities of the Board for the preceding year and shall submit for the approval of the Society the budget for the ensuing year, which said report and budget shall be filed and shall become part of the records of the Society."

Undoubtedly much of the Board's prestige with the membership is due to the fact that it has not exceeded the authority granted it under the Constitution and By-laws. For example, where matters of "general policy" are concerned, the Board has invariably referred them to the Society for its decision. There have been times when expediency would suggest the advisability of the Board's accepting the responsibility itself. However, succeeding Boards have agreed that they could only retain the confidence of the members if they scrupulously adhered to the rules laid down for their operation. Consequently, no "policy" is adopted without an opportunity being afforded every member to express himself or herself by oral vote or by written ballot.

As you well know, an agenda is sent to the members of the Society in advance of each business meeting setting forth the items to be considered. Where issues are of a vital nature, authority is sought by the Executive Board to take a mail vote so as to give every member an opportunity to express his or her wishes.

Obviously, the conduct of the affairs of a Society as large as ours is no small assignment. Although the Board has not infringed upon the Society's prerogative of determining "general policy," "ordinary business," as referred to in the Constitution and By-laws, is a misnomer. Those who have served on the Board in one capacity or another will testify to this fact and that their experience has been an eye-opener and a liberal education in the conduct of a modern medical society. Not only is the Board responsible for the day-by-day management of the Society's affairs but, with few exceptions, it originates, investigates and recommends to the Society the stand which it believes should be taken with respect to all important matters.

## Reorganization Now Proposed

Your Study Commission is sympathetic to the view that nothing is of greater importance to our Society than that it be a cohesive and united body. It has had an open mind to any suggestions which would promote this objective. At this point it would perhaps be well to reiterate that the motion creating the Commission was prompted by the feeling that there should be a larger and more representative policy-making body. It was proposed, in effect, that the Society's organization structure be reorganized along the lines of most state medical societies, whose policy-making bodies consist of a house of delegates or general assembly. It was this suggestion that was at the heart of the motion and, therefore, was considered first in the Commission's deliberations.

It need hardly be said that our situation in the District of Columbia is unique. Although ours is a constituent body of the American Medical Association, and has the status of a state medical society, it possesses many of the characteristics of a large county medical organization. Moreover, its jurisdiction is confined to a comparatively small area, much smaller in fact than many metropolitan centers. Unlike other state medical societies, it has no county medical units which send delegates to an annual meeting. All Active and Life members of our Society, being readily accessible, are eligible to participate in the Society's business meetings when they wish to do so, with the full opportunity to vote on all vital issues.

What then would be gained by the organization of a house of delegates or general assembly? In our situation we doubt if it would be as democratic and efficient as the present system. In other words, any gains which would accrue, in the Commission's opinion, would not justify the considerable cost involved and the employment of additional personnel required.

Your Commission, therefore, cannot honestly go along with this proposal.

## Election Procedure

The present election procedure was adopted only after many unfortunate experiences. One method or another had been tried over several years. Nominating committees had been appointed and subsequently abandoned. Political cliques had also come into existence and faded.

At the time of the adoption of the present Constitution and By-laws, no provision was made for the appointment of a nominating committee, nominations being made from the floor. This method, it was soon discovered, had serious defects. In the first place, all interest in elections was focused on the President-elect. Immediately after nominations for this office, most members present were no longer interested. In fact, many of them left long before the slate was complete, little realizing how important some of the other offices are. For example, no office in the Society is of greater importance than delegate to the American Medical Association; however, usually only a handful of members were on hand when this nomination was made.

Finally, in 1940, the Executive Board came to the conclusion that something had to be done to assure the selection of qualified and interested members to posts of vital importance. It thereupon submitted for the Society's consideration the election procedure which now exists.

The procedure adopted by the Society is, briefly, this: In the first week of January ballots for the Nominating Committee are sent to the membership. Twenty-one names of Active members, selected by the President and confirmed by the Executive Board, appear on the ballot. Every effort is made by the President to submit names of members who are representative of the various groups and institutions, types of practice, and sections of the city.

Ample opportunity is afforded each member to vote, it being stated in the ballot that it must be returned by February 15, a month and a half after it was mailed. Two tellers are appointed by the Board to count the ballots. The 7 nominees receiving the largest number of votes are designated the Nominating Committee. The nominee receiving the most votes is informed of this fact by the Secretary of the Society, who advises him when and where the meeting of the Committee is scheduled. He is informed that the membership roster, list of officers, past and present, and other information will be found in the meeting room. He and no other member of the Committee is told who the other members are. All of them come to the meeting unknown to each other; therefore, they are free to make such selections as they deem in the best interests of the organization. No officer or member of the Executive Board is present at the Committee's deliberations.

Because of the unfortunate repercussions following campaigns for offices in the Society some years ago, the Society concurred in the Board's recommendation that only 1 nominee be selected for each office. However, the Constitution and By-laws provides that the Society's membership be notified that nominations can be made from the floor at the March meeting but not thereafter.

Elections are held at the Annual Business Meeting in May, all nominees elected taking office on July 1.

No system of electing officers is perfect, but your Commission believes that the method outlined above comes as close to it as any within its knowledge. The Commission would not advise any change in this procedure.

## Commission's Recommendations

1. As you are well aware, the Society's organization year begins on July 1. However, its fiscal affairs are conducted on a calendar basis. *Your Commission would recommend that the organization year be changed to coincide with the fiscal or calendar year.* It offers in substantiation of this recommendation that the change would contribute to the efficiency of the organization. For example, committees are now appointed and supposedly become active on July 1 but they seldom get under way until 2 or 3 months thereafter because, as is well known, summer months in Washington are not conducive to activity. If the proposed change is made, committees would begin to function immediately upon their appointment.

Then, too, the President would find his administration more satisfying than at present. He also is handicapped because of summer inactivity. His year comes to a climax during the Annual Scientific Assembly, usually held in October. What occurs thereafter is frequently an anticlimax. It would be much more satisfying to him if he were to begin his year on January 1. The chronology of "big" events thereafter would be the Midwinter Seminar in February and the Assembly near the close of the term.

At this point, your Commission would like to suggest that there be a rearrangement of the schedule of meetings. It would propose that the Midwinter Seminar be held in February, as it now is; that the Annual Business Meeting in May be held at the same time as the Annual Scientific Assembly, which might be scheduled for November rather than October. Then in May, a refresher course could be substituted for the present Annual Business Meeting. The President-elect and other officers elected in November would take office on January 1.

2. *Another recommendation which the Commission wishes to make is that there be two advisory bodies created: one known as Consultants to the Executive Board, consisting of chairmen of committees and*

*sections of the Society with whom the Board would review problems of a policy nature before they are brought before the Society. The other would be known as Citizen Advisors.* With respect to the latter, it is essential, in your Commission's opinion, that somehow the outstanding citizens be apprised of the Society's views with respect to community health problems. The creation of such a body is, in the opinion of the Commission, long overdue.

3. *Several years ago the Executive Board recommended the establishment of what was proposed to be called the Medical Council of the Washington Metropolitan Area.* It was proposed that the Council consist of one representative each from our Society and nearby county medical societies within the area. The purpose of the Council would be to afford an opportunity to exchange views on mutual problems, and where indicated, take concerted action, it being understood that all decisions of the Council would have to be ratified by the medical societies they represented.

Due to obstacles which could not be overcome at that time, the Council idea was dropped. However, it has been revived. It is your Commission's understanding that the first meeting has been held, with all medical societies in the area represented. The Commission believes this to be a step in the right direction, and one which may lead to a closer knit and more effective medical profession.

The most desirable type of organization would be a Medical Society of Greater Washington, into which all medical societies in the area would be merged.

The above changes, except for the Council, will require amendments to the Constitution and By-laws. However, your Commission sees no reason for rewriting this document on the basis of the changes required. This would, in the Commission's view, be a laborious and unnecessary task.

Respectfully submitted,
William P. Herbst, Jr., M.D., *Chairman*
Brian Blades, M.D.
Robert J. Coffey, M.D.
Oscar H. Fulcher, M.D.
Herbert S. Gates, M.D.
Raymond T. Holden, M.D.
A. Magruder MacDonald, M.D.

## REPORT OF THE HOUSE COMMITTEE

Because of the importance of the undertaking proposed and the considerable investment involved, your House Committee deems it advisable to repeat its previous report in abbreviated form.

Those who were present at the meeting on October 30, 1956, will recall that the Committee's report concerned itself with the restoration and the remodeling of the Society's property at 1710 M Street, N.W., which, as you know, is adjacent to this building. This property was purchased by the Society in 1937 at a cost of $30,090.80. Its replacement cost, less depreciation, in May 1956 was estimated by appraisers at $81,900.00.

In the early years, following its purchase, the building was used as an apartment house; even then it was old and in not too good condition. However, only essential expenditures were made for repairs and replacements pending the Society's decision as to what should be done with the property.

Shortly before World War II, a restaurant was installed on the first floor. It was thought by the House Committee of that year that a substantial portion of the building might be converted to commercial uses. There was also some talk at the time of eventually remodeling the building for the Society's own use as reading rooms, offices, etc. These, and other plans, were abandoned at the beginning of the War.

As might be expected, the building, then more than 50 years old, began to deteriorate rapidly since materials for labor for upkeep were difficult to obtain in wartime. In fact, it became so shabby and its tenants so undesirable that the Society's officers were much disturbed.

In the spring of 1944, as the War approached its close, the Medical Bureau, which had been situated in cramped quarters in the Society's building, was transferred to the renovated first floor front of 1710 M Street, N.W. A few years thereafter the whole first floor was taken over by the Society for its own use, the front half being used for its offices and the back being reconstructed for the Medical Bureau.

The upper floors continued to be used as a rooming house; however, this portion of the property had deteriorated to a point where parts of it were uninhabitable. The Committee and Executive Board agreed that the Society could ill afford to own and operate a property of this kind. It concluded that restoration and remodeling were not only essential, but something had to be done without delay.

Various plans were discussed, taking into consideration the Society's needs and interests. Costs of their implementation also had to be considered and the returns which might reasonably be expected.

Alternate plans were given serious consideration by the Committee and later by the Executive Board.

PLAN I envisioned the use of the basement, which is roomy and above ground level, but in a dilapidated state, for additional office space which is now required, and a fireproof vault constructed under 1718 M Street, N.W. with an entry from the basement of 1710 M Street, N.W. The first floor would continue to be used as offices, with improvements as required. The second, third, and fourth floors would be converted to efficiency apartments, these apartments to be modern in every respect. The overall cost of this project, it was estimated by the builders, would be in the neighborhood of $88,000. However, they were confident that there would be 6 per cent return on the investment.

PLAN II contemplated the use of the basement for offices and a vault as previously described; the first floor to be used as it now is; the second floor to be taken over by the Society, the front half for committee rooms, the rear to be rented to a health organization acceptable to the Society.

There has long been need for additional committee rooms. Perhaps it is not realized by the membership generally that frequently there are 2 or 3 meetings of committees, sections, and small medical groups in the Society's building on the same evening. Satisfactory accommodations are, at present, often not available.

This plan provides for the construction of a passageway between the second floors of the two buildings so that the committee rooms would be readily accessible. The upper 2 floors would not be converted to first class condition as in PLAN I, but would be renovated and essential repairs made so as to attract tenants desiring better accommodations than now exist.

PLAN III would be the same as PLAN II, except that the third and fourth floors would be converted into efficiency apartments. Income from rental under this plan would be less than PLAN I, but substantially larger than PLAN II.

At the business meeting of the Society on October 30, 1956, the Society authorized the employment of architects to draw plans based on PLANS II and III for the purpose of obtaining bids. The plans were drawn and 5 bids were obtained. They range from $68,000 to $139,577. The broad spread can only be accounted for by the fact that those submitting the highest bids were not too enthusiastic about engaging in alterations of buildings such as that at 1710 M Street, N.W. At any rate, the Committee voted, as did the Board, to recommend acceptance of the $68,000 bid, which was submitted by Michael M. Abrams, General Contractor, Builder, and Engineer of 6406 Georgia Avenue, N.W., Washington 12, D. C. A careful investigation was made to determine the reliability and financial responsibility of Mr. Abrams. It was found to be satisfactory.

On the basis of the low bid, the costs of the proposed project would be approximately as follows:

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|---|---|
| Restoration and remodeling | $68,000.00 |
| Architects' fees, 10 per cent of bid (includes supervision) | 6,800.00 |
| Bond for Mr. Abrams to protect the Society, 1 per cent of bid | 680.00 |
| Total | $75,480.00 |

As those of you who have had some experience with the restoration or remodeling of old buildings know, it is the unforeseen which may increase costs. In this instance, it should at most not exceed $10,000. The best guess is that the overall cost will be somewhere between $80,000 and $85,000.

As to the financing of this project, the Society has available in cash and savings, for investment in this project, about $58,000. These funds have been accumulating slowly over a period of 25 years. Unless the cost of this project runs considerably higher than anticipated, it should not be necessary to borrow more than $17,000 to $20,000. The Union Trust Company, where the Society has done business for many years, has stated that it will make this money available at 4½ per cent interest, which is, at this time, lower than can be obtained elsewhere.

Another facet of the finances involved in this undertaking is the income which may be expected from rental of the building. A reliable builder has estimated that the income from the efficiency apartments will be, approximately, $436.00 per month. There will be additional income from the back half of the second floor, which, it is expected, will be rented to some acceptable health organization. How much will be derived from this source remains to be determined. Of course, there will be no income from the front half of the second floor, the first floor, and the basement, all of this space being used by the Society itself, or affiliated groups.

The Committee has recommended to the Executive Board, which will in turn submit its recommendations to you, that this project be undertaken immediately. The Committee is confident that the facilities which will be made available to the Society will be adequate for the next 20 years. In the meantime, the income from the apartments in the building and the space on the second floor should pay the cost of the restoration and remodeling, plus a fair return on the investment.

Respectfully submitted,
William Ross Morris, M.D., *Chairman*
Julius Fogel, M.D.
Vincent Hernandez, M.D.
Arthur H. Lewis, M.D.
George William Ware, M.D.
Theodore Wiprud, *Secretary*

## JOIN CADUCEUS CHORAL SOCIETY

The Doctors' Symphony Orchestra plans to organize a sister choral group of men and women to be known as the "Caduceus Choral Society."

All members of the Medical, Dental, Pharmaceutical, Nursing, and allied professions, as well as wives and members of their families who are interested in singing, are urged to come to the first rehearsal to be held Tuesday, April 23, 1957, in the Choir Room of the Washington Cathedral (enter from Woodley Road, N.W.) at 7:30 p.m.

This is to be a permanent organization which will function with the Doctors' Symphony Orchestra in producing as its first presentation sometime in the late fall the "Christmas Oratorio" by J. S. Bach. This concert will be sponsored by the Woman's Auxiliary to the Medical Society of the District of Columbia, which will use the proceeds for nursing scholarships. (This project has the official endorsement of the Medical Society of the District of Columbia, the District of Columbia Dental Society, and the Graduate Nurses' Association of the District of Columbia.)

The Doctors' Symphony Orchestra is still interested in securing musicians. They meet each Thursday at 8:00 p.m. in the offices of the Perpetual Building Association, Wisconsin and Montgomery Avenues, Bethesda, Maryland.

## SIXTH INTERNATIONAL CONGRESS OF OTOLARYNGOLOGY

The world-wide enthusiasm for the Sixth International Congress of Otolaryngology is reflected in heavy advance registrations, almost half of which are from foreign countries. The Congress will convene at the Hotel Statler, Washington, May 5–10. The opening event will be a Convocation in Constitution Hall at 5:00 p.m., Sunday, May 5. This will be followed by the President's Reception and a buffet supper at the Pan American Union. Other social events include a special opening of the National Gallery of Art on Monday evening, May 6; a concert by the National Symphony Orchestra on Tuesday, May 7; and the banquet on Thursday, May 9.

The scientific program includes interesting contributions in all phases of otolaryngology. More than 250 voluntary papers are scheduled as well as over 60 medical films. Color television originating at the Armed Forces Institute of Pathology, Walter Reed Army Medical Center, will be presented on Tuesday and Thursday mornings.

Special sightseeing tours to points of interest in and around Washington have been arranged for Congressionists, and there will be daily tours of the Armed Forces Institute of Pathology and the Audiology and Speech Center of Walter Reed Army Medical Center for physicians.

Otolaryngologists are urged to register now in order to save time and confusion at the time the Congress opens. Dr. Victor R. Alfaro is Chairman of the Committee on Local Arrangements. For further information communicate with Dr. Paul H. Holinger, General Secretary, 700 North Michigan Avenue, Chicago 11, Ill.

# On the Lighter Side

April has always been something special for the American male from 6 to 90, and for a great many American females April has come to mean more than a new Spring chapeau to match the new Spring Easter suit—and gloves—and shoes—and hose—and the et ceteras that women like to wear at this time of the year. April has come to mean the Opening Day of Baseball in America.

All through the long cold winter the hot stove discussions have been going on and on. The merits of this player and of that player, of this team or that team have been discussed, explained, denounced or exhorted. All the fans know the value of trades, and they feel within their hearts that the home town team, with or without trades, but with new faces in the lineup, will somehow work the miracle that will keep the team surging toward the top—and maybe—the World Series.

In the Spring, every muscle-bulging rookie looks like the answer to that will-o'-the-wisp miracle. Even the seasoned manager talks like a Pollyanna when he is confronted with that Spring rookie enthusiasm; and the baseball writers begin sending reams of optimism over the wires to their city editors. However, by April 15 most of the rookies who were a "cinch to make it" have been sent down to the minors, farmed out on recall, or just plain booted out. A few of the promising ones are carried North with the regulars for further inspection, where wilting under fire, inability to get the opposing side out, and the special ability to strike out with men on base or to hit into the double play with consistency usually end up with a one-way ticket to AA, A or A minus.

All of this means only one or two things to Dr. George A. Resta, our own representative to the Washington Senators (new name, new president but the same old faces on the field). Dr. Resta will be beginning 16 weeks—take a few or give a few—of being a medical shepherd to a flock of high-salaried athletes, and a medical-package deal to some odd thousands of spectators in the stands. Dr. Resta loves his job and every day that the Senators are on the home grounds you will find him in the same familiar seat with the same familiar cigar clenched tightly in his teeth.

Fishing note: Early in March the Key Largo Ocean Reef Club was treated to a brand of terpsichore that had the place a-rockin' and a-rollin'. Dr. Alec A. Preece, Dr. A. F. Castro, and Dr. Richard H. Fischer had arrived by plane from Washington, D. C. to spend 3 days of contest fishing in the Gulf Stream just off the Key.

Every March the Ocean Reef Club sponsors a "fish fry" by giving prizes to the members and guests who catch the largest fishes among the various species of fish that inhabit those waters. This contest is kicked off by a Club get-together the night before the contest gets under way. And to this get-together our three Fishcateers arrived in fine fettle.

During their 3 days aboard Dr. Fischer's 22-foot cruiser, *The Catfish*, a large variety of fish were pulled into the boat including sailfish, barracuda, dolphin, mackerel, red snapper, bonito, and the prize of them all, a 36-pound kingfish that won the Ocean Reef Club certificate!

Bowling note: The D. C. Medical Bowling League's season is now in the home stretch, and the first 5 prize-winning places are being captured and lost by the following teams: Doctors, Casualty, Children's, Suburban, Sibley #1, Sibley #2, Prince Georges, and Columbia. They are all so closely placed it is difficult at this time to predict anything with certainty. More about this in May or June.

Chuckle note: "Madam," said the Judge sternly, "you are charged with creeping into your husband's room and shooting him with a bow and arrow. Will you now tell the court your reason?"

"Yes, your honor," she said sweetly, "I didn't want to awaken the children."

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If you do not believe there is a Providence, just watch some of the women drivers and try to figure out what saves them.

* * * * *

Distraught husband just before a party: "I find your new gown rather confusing." Cool wife: "How so, dear?" Husband: "Well, are you inside trying to get out, or outside trying to get in?"

J. Earl Kadan, M.D.

# News and Personals

## MEETINGS—Past and Future

**Major General Leonard D. Heaton, Commanding General of Walter Reed Army Medical Center,** extends an invitation to Washington physicians and the public to join Walter Reed patients and duty personnel in worship at the **Annual Easter Sunrise Service,** April 21, beginning at 6:30 a.m. Following pre-service "Massing of the Colors" ceremonies, Dr. Edward L. R. Elson, pastor of the National Presbyterian Church, will deliver the Easter sermon. Music will be furnished by the United States Army Band and two choirs. Walter Reed's formal gardens will again be the scene of what is Washington's oldest Easter sunrise service.

**Medical staff members of Garfield Memorial Hospital** will hold their Eighth Annual Dinner on Monday, April 29, at the Kennedy-Warren Hotel. Because of the integration of the Hospital into the new Washington Hospital Center, this will be the last staff banquet of Garfield Hospital. Tickets at $9.00 each may be obtained from Dr. Robert Nelson, 1824 Massachusetts Avenue, N.W. (Decatur 2-1707) or from the Hospital. Cocktails will be served at 6:30 and dinner at 7:15 p.m.

Elsewhere in this issue of the MEDICAL ANNALS is a special announcement of the **Sixth International Congress of Otolaryngology**, to be held in Washington, D. C., May 5–10, at the Hotel Statler. Washington will be host to two important medical meetings during the month of May.

A tentative schedule of arrangements for the **Sixth Annual Convention of the American College of Cardiology** has been received in the Medical Society's offices. The meetings will be held at the Willard Hotel for four days, beginning May 15. There will be scientific and technical exhibits as well as an impressive scientific program.

Six scientific sessions have been planned to cover the following subjects: (1) May 15 (afternoon): Postgraduate Symposium on Electrocardiography and Vectorcardiography; (2) May 16 (morning): Pericarditis with Effusion and Constrictive Pericarditis; (3) May 16 (afternoon): Diagnostic Methods, Part I; (4) May 17 (morning): Diagnostic Methods, Part II; (5) May 17 (afternoon): Open Heart Surgery, and (6) May 18 (morning): Seminar.

Dr. Chauvez, of Mexico City, will be the guest speaker at the evening meeting, May 15. The Groedel Memorial Lecture is scheduled for 5:30 p.m., May 16, and the banquet for the evening of May 17. An elaborate program is in the making and many Washington physicians will wish to attend these sessions.

**The Section on Anesthesiology and the D. C. Society of Anesthesiologists** held a joint meeting in the Medical Society's auditorium, February 25. Dr. William S. Howland, Director of Anesthesiology, Memorial Center for Cancer and Allied Diseases, New York City, presented a paper on "Problems of Massive Blood Replacement." Obstetricians and gynecologists were invited to attend this meeting.

**A Symposium on the Sulfonylureas in Diabetes Mellitus** was held in the Medical Society's auditorium, March 24. The meeting was held under the auspices of the Diabetes Association of the District of Columbia.

Dr. James M. Moss, President of the Association, was chairman and Dr. Alvin E. Parrish, co-chairman, at the morning session. Dr. Samuel D. Loube presented the first paper at the opening session on "The Historical Development of the Sulfonylureas."

Chairman and co-chairman for the afternoon session were Dr. Louis K. Alpert and Dr. Aaron G. Saidman, who is Chairman of the Clinical Section.

A panel discussion highlighted the afternoon session, presented by four members of the District Medical Society, namely, Drs. Samuel J. N. Sugar, Lawrence J. Thomas, Dewitt E. DeLawter, and Walter L. Henry, who represented George Washington, Georgetown, and Howard University Schools of Medicine. The topic they discussed was "Clinical Observations in the Treatment of Diabetes Mellitus with the Sulfonylureas."

The following members of the Medical Society of the District of Columbia met, March 13, 1957, to organize a new **District of Columbia Allergy Society**: Drs. Ellis April, Harry S. Bernton, Grafton T. Brown, Halla Brown, Marvin Fuchs, Harry A. Horstman, Eloise Kailin, Francis J. Murray, and Alvin Seltzer.

A committee was appointed to draw up a constitution for the Society, and to make plans for election of officers in the near future.

Allergists of the Washington Metropolitan Area who have not been notified and who are interested in becoming members of this new Society are asked to get in touch with Dr. Seltzer at 2025 Eye Street, N.W.

**The Washington Highlands Medical Clinic** held its Seventh Annual Dinner at the Woodner Hotel, February 14, with Dr. Reuben Sorkin presiding. The program consisted of two addresses, one by Dr. Otis Farley on "The Greater Southeast Hospital Foundation," and the other by Dr. Benjamin Karpman, who discussed "The Happy Family."

At the February meeting of the **Metropolitan Health Officers' Association,** Dr. Ralph G. Beachley, Health Officer of Arlington County, was elected President. He succeeds Dr. Daniel L. Seckinger.

Dr. John R. Pate, of the D. C. Health Department, was elected Vice President, and Dr. Thomas Englar, Health Officer of Prince Georges County, Maryland, is the Secretary-Treasurer.

**The District of Columbia Dental Society** sponsored its **25th Annual Postgraduate Clinic** at the Shoreham Hotel, March 10–13. Four members of the District Medical Society took part in a panel discussion on "Your Health as a Dentist." They were: Dr. Edward J. Stieglitz, moderator, and Drs. Paul F. Jaquet, Calvin T. Klopp, and J. Ross Veal, panelists.

Dr. Sterling V. Mead, Associate member of the Medical Society, conducted a Table Clinic, March 13, on "An Improved Technic of Extraoral Fracture Fixation."

**The Washington Psychiatric Society** heard an address by the President of the American Psychiatric Association, Dr. Francis Braceland, on March 15. The meeting was held in the Medical Society's auditorium. Dr. Braceland spoke on the subject, "Analecta Psychosomatica."

## GENERAL NEWS

The regular session of the **Executive Board of the Medical Society of the District of Columbia** was held on February 25. At this meeting it was decided that the **Edward Y. Davidson Award** be substituted for the biennial Davidson Lecture. The award would be given each year to the author of the best paper published in the MEDICAL ANNALS during the preceding year. The procedure to be followed will be discussed at a later date and published in the MEDICAL ANNALS.

**A Committee on Poliomyelitis** was authorized at the meeting of the Board on January 28 for the purpose of conducting a vaccination program in the Washington Metropolitan Area. The Committee was to include at least seven members of the Society and representatives from civic and other interested groups in the community. With the approval of the Board, President Caulk appointed the following members of the Society to this Committee: Dr. Montgomery Blair, Jr. *Chairman*, Dr. Daniel L. Finucane, *Co-chairman*, Drs. William S. Anderson, W. Montague Cobb, Milton C. Cobey, Herbert S. Gates, Milton M. Greenberg, Michael J. McInerney, Preston A. McLendon, and Robert B. Nelson, Jr.

Dr. Daniel L. Finucane, Director of Public Health for the District of Columbia, requested the continuation of the Advisory Committee on the Budget for the Department of Public Health for the District of Columbia. At its meeting on June 25, 1956, the Board voted to change the name of this committee to **Special Committee on the Health Department Budget.** The Board voted to continue this committee with the same members as at present. They are: Dr. William P. Herbst, Jr., *Chairman*, Drs. Walter Bloedorn, Crenshaw D. Briggs, Warwick T. Brown, Paul B. Cornely, Francis M. Forster, Hugh H. Hussey, George Maksim, Preston A. McLendon, Winfred Overholser, Herbert P. Ramsey, R. Lomax Wells, and Wallace M. Yater.

Dr. William F. Burdick was appointed to the Hospital Care Committee of the Health Section, United Community Services, to succeed Dr. Ernest A. Gould.

In response to a request from the **Hospital Service Agency** for appointees to its Board of Trustees, the Executive Board reappointed the following members: Drs. William H. Beard, C. Willard Camalier, Jr., Oscar B. Hunter, Jr., Henry C. Macatee, Margaret M. Nicholson, and Frank S. Pellegrini.

**Medical Education Week** will be recognized, April 21–27. This is the second annual observance of Medical Education Week, and it will focus the attention of the American people on the national importance and indispensability of medical education.

Another "week" to be observed soon is **National Hearing Week,** May 5–11. The American Hearing Society will alert the public to problems of hearing loss and the importance of efforts to prevent deafness, conserve hearing, and, failing those, then rehabilitation. Gifts are being solicited for these purposes by the American Hearing Society, 1800 H Street, N.W., Washington 6, D. C.

**The Eye Bank and Research Foundation** was formed in January as a coöperative effort of the 58 Lions Clubs in District 22-C, which includes the District of Columbia and five Maryland counties.

The agency, with newly opened offices at 333 Carroll Street, N.W., in Takoma Park, D. C., will gather pledges for eye donations and keep them on file. When the donor dies it will seek the family's endorsement before the pledge is honored. When permission is granted, the Foundation will pay the cost of the necessary operation, which must be performed within 5 hours after death. If there is no immediate need for the cornea, it is put through a dehydration process which preserves it for later use and for shipment all over the world.

The Departments of Internal Medicine and Orthopedic Surgery of the new **Washington Hospital Center** will be staffed as follows:

Dr. Theodore J. Abernethy, of Emergency Hospital, will be Chairman of the Department of Internal Medicine; Dr. Maurice H. Friedman, of Garfield Hospital, Vice Chairman; Dr. H. Franklin Kreuzburg, also of Garfield, Secretary.

Chairman of the Department of Orthopedic Surgery will be Dr. Julius S. Neviaser, of Emergency; Dr. William J. Tobin, of Garfield, will be Vice Chairman; and Dr. Sanford Eisenberg, of Emergency, Secretary.

**The Woman's Auxiliary to the Medical Society of the District of Columbia,** through the Chairman of its Nominating Committee, Mrs. Julius J. Radice, presented the following slate of candidates for office at its meeting, March 13, in the Medical Society's library:

President-elect: Mrs. M. Noel Stow
First Vice President: Mrs. William J. G. Davis
Second Vice President: Mrs. George J. Stuart
Recording Secretary: Mrs. Francis J. Murray
Assistant Recording Secretary: Mrs. Hugh W. Irey
Corresponding Secretary: Mrs. James Peter Murphy
Assistant Corresponding Secretary: Mrs. George W. Ware
Treasurer: Mrs. Hugh O. House
Assistant Treasurer: Mrs. V. John Murgolo

Their election was unanimous. Mrs. Albert E. Marland, the retiring President, will be succeeded in office, July 1, by Mrs. James E. Wissler. Mrs. Stow will take office as President in 1958.

**Dr. Frank E. Wilson,** Executive Vice President of the **Joint Blood Council,** announced, March 1, the launching of a Nation-wide survey of blood transfusion services made possible through a Public Health Service grant of $50,000. During a 2-year study, information of vital importance in normal peacetime blood banking as well as in civil and military defense planning will be collected, analyzed, and disseminated.

Among the objectives of the study are preparation of guidelines and standards for accreditation of blood banks, development of a glossary of terms and solution of numerous nomenclature problems, inventory of research in blood and blood derivatives, and the assembling and analysis of needed data appertaining to these objectives. Questionnaires and field sampling will be the principal media of the survey.

**The Reverend Thomas J. O'Donnell, S. J.,** Regent of Georgetown University Hospital, has been elected President of the **Hospital Council of the National Capital Area, Inc.** He succeeds Mr. Justin D. Bowersock, Executive Vice President of the Union Trust Company. The Hospital Council represents 17 institutions in the District area on matters which require unity of action.

On February 1 announcement was made of two **new appointments at Glenn Dale Hospital.** Dr. Moe Weiss, previously Chief of Medical Services at Glenn Dale, was named Superintendent, succeeding Dr. Daniel L. Finucane, who is now the District Health Officer.

Dr. Weiss is a graduate of New York University College of Medicine. Coming to Glenn Dale as a medical officer in 1941, he left to serve in the Army Medical Corps during World War II, and upon his return was made Chief of Medical Services. He is also Clinical Assistant Professor of Medicine at Georgetown University School of Medicine.

Dr. David Goldenberg was appointed Chief of Medical Services to succeed Dr. Weiss. The new appointee has been a medical supervisory officer at Glenn Dale since last September. A graduate of Washington University (St. Louis) Medical School, he is an Active member of the District Medical Society.

Dedication ceremonies for a **new wing to the Naval Medical Research Building** at the National Naval Medical Center, in Bethesda, were held on March 1. Captain Robert W. Schepers, District Public Works Officer, Potomac River Naval Command, accepted the wing for the Navy from the President of the American Construction Company and in turn presented it to Rear Admiral B. W. Hogan, Surgeon General of the Navy, who accepted it for the Bureau of Medicine and Surgery.

Dr. Howard T. Karsner, Medical Research Advisor to the Surgeon General of the Navy, was the principal speaker. In his speech, Dr. Karsner outlined some of the past and current research projects of the Naval Medical Research Institute and described how they contributed to the overall Navy Medical and Department of Defense Research projects.

**Colonel Joe M. Blumberg, M.C., U.S.A.,** has been appointed **Army Deputy Director of the Armed Forces Institute of Pathology.** He reported for duty at the Institute, February 18.

Colonel Blumberg was an Associate member of the District Medical Society from 1950 to 1954 when he was Assistant Chief, and later Chief, of the Laboratory Service of the Walter Reed Army Hospital. He resigned from the Society when he was sent to Japan as Commanding Officer and Chief of Pathology of the 406th Medical General Laboratory in Tokyo.

**Dr. Harold Kennedy, Health Officer of Fairfax County, Virginia,** was honored, February 7, as the No. 1 Citizen of Fairfax County. At the annual banquet of the Fairfax County Federation of Citizens Associations, held at the Courthouse Country Club, he was awarded The Evening Star Trophy for the personal contribution he has made to civic life in that county.

Under Dr. Kennedy's leadership, Fairfax County was the first community in the country to participate in the mass testing of commercially produced Salk polio vaccine on school children three years ago. A committee, composed of representatives of the Federation, the Chamber of Commerce, the League of Women Voters, and the Community Chest, also cited his leadership in mobilizing support for other projects to improve the welfare of Fairfax County residents.

**Deaconess Margaret S. Bechtol, Superintendent of Episcopal Eye, Ear and Throat Hospital,** is being honored by the Hospital's Board of Lady Managers through a nursing scholarship in her name. The scholarship, to be awarded annually to an applicant to the School of Nursing of the new Washington Hospital Center, will pay the 3-year tuition fee, not to exceed the sum of $500.

## PERSONALS

**The George Washington University Medical Society** honored **Dr. John Hugh Lyons** at its Annual Banquet at the Shoreham Hotel, February 23. **Dr. Richard H. Fischer,** President of the Society, presided at the meeting and awarded Dr. Lyons the Society's 1957 Award of Merit for service to the community, the University, and the Society.

Dr. Lyons is Past President of the D. C. Medical Society and Emeritus Chief of Surgery at Emergency Hospital. Dr. Fischer spoke of the high esteem in which Dr. Lyons is held among his colleagues, many of whom he has counseled through medical school and practice, and the warm affection of his patients over a wide area.

Dr. Lyons, a graduate of George Washington University, served his internship at Emergency Hospital, with which institution he was to form a lifetime association. He spent four and a half years at the Mayo Clinic in Rochester as Fellow and Assistant in Surgery before returning to Washington, his native city. Beginning as Associate in Surgery at Emergency Hospital in 1924, he was made Chief of Surgery in 1945, relinquishing this post in 1956. Since 1930 he has been Attending Surgeon at Children's Hospital.

During World War II, Dr. Lyons served in the Medical Corps of the United States Army with the rank of Colonel and was in command of Woodrow Wilson Army General Hospital, Staunton, Va., and of England Army General Hospital in Atlantic City, N. J.

In addition to his doctorate from George Washington University, he holds the degree of Bachelor of Science from George Washington and the degree of Master of Science in Surgery from the University of Minnesota. He has served in the Department of Surgery of George Washington University School of Medicine since 1924, the last ten years as Clinical Professor of Surgery. He was President of the George Washington University Medical Society in 1951–52 and has served on its Council for seven years.

Guest speaker at the Annual Banquet was Mr. Robert E. Button, Director of Broadcast Services of the Voice of America, which is celebrating its 15th Anniversary. Each year the Society honors the anniversary of one of the graduating classes. This year it was the 30th anniversary of the Class of 1927. **Dr. Donald H. Leeper, Jr.,** President-elect of the Society, was in charge of banquet arrangements.

DR. LYONS HONORED

DR. JOHN HUGH LYONS (right) accepts Award of Merit from DR. RICHARD H. FISCHER, President of the George Washington University Medical Society, at its Annual Banquet at the Shoreham Hotel, February 23.

**Dr. George Maksim** moderated a panel discussion on "Fitness of American Youth—Whose Responsibility?" which was held at the Sheraton-Park Hotel, April 1. A special session to discuss this subject was called by the American Academy of Pediatrics during its recent Annual Meeting. Present for the meeting was Dr. Edgar E. Martmer, President of the Academy. Greetings were extended by Mr. Shane McCarthy, Executive Director of the President's Council on Fitness of American Youth. Dr. Maksim is Chairman of the Academy's Committee on School Health.

**Dr. Jeanne C. Bateman** is directing a project at the Garfield Memorial Hospital with funds contributed by the Atomic Energy Commission. The latter renewed a contribution of $20,430 toward support of the project, "Investigation of Distribution, Localization and Excretion of Tagged Triethylene Thiophosphoramide Following Injection by Various Routes."

Dr. Bateman is also the chief investigator for a "Study of Carcinolytic Action of Certain Phosphoramide Drugs on Human Cancer," which is being financed by a renewal grant of $12,000 to Garfield Hospital by the Lederle Laboratories Division of the American Cyanamid Company.

**Dr. Edgar W. Davis** addressed several groups in California in January. On January 30 he spoke at the Veterans Administration Hospital in San Fernando on "Silent Bronchogenic Carcinoma." As guest speaker at the Chest Disease Symposium, sponsored by the Los Angeles County Medical Association in Los Angeles, he gave several lectures. They covered the following topics: "Chest Emergencies," "Surgical Aspects of Pulmonary Cancer," "Mediastinal Tumors," and "Surgery in Acquired Heart Disease." He also participated in a Cancer Workshop and a question-and-answer period on general thoracic diseases.

**Dr. William J. Tobin** was in Chicago the latter part of January where he attended a meeting of the American Board of Orthopaedic Surgery and served as Examiner for Part II of the examinations. During the same visit he presented a paper at the Annual Meeting of the American Academy of Orthopaedic Surgeons, held at the Palmer House, January 26–31, on "Familial Osteochondritis Dissecans, Associated with Tibia Vara." In a postgraduate course held in conjunction with this meeting, he lectured on "The Pathology of Arthritis."

**Drs. Lestar S. Blumenthal and Marvin Fuchs** are co-authors of a paper, to be presented by Dr. Blumenthal, at the Annual Meeting of the International Academy of Proctology at the Plaza Hotel in New York, April 29–May 2. The subject of the paper is "Abdominal Migraine."

**Dr. Eugene G. Lipow** was co-sponsor of a scientific exhibit at the Ninth Annual Scientific Assembly of the American Academy of General Practice in St. Louis, Missouri, March 25–28. With Drs. Richard T. Smith and Kenneth M. Kron, of Philadelphia, he presented an exhibit entitled "Soft Tissue Injection of Musculo-skeletal Conditions."

**Dr. Charles A. Hufnagel,** Associate Professor of Surgery, Georgetown University School of Medicine, appeared on "Medical Horizons," a live medical documentary sponsored by Ciba Pharmaceutical Products, Inc. over the ABC (WMAL-TV) Network, February 24. The subject of the telecast was "Heart Aneurysms." Narrator Don Goddard and his technical staff moved all the necessary cameras and equipment into the Hospital for the broadcast.

**Dr. Thomas H. Alphin,** Director of the Washington Office of the American Medical Association, discussed "Newer Matters of Legislation" before the Columbus Academy of Medicine at its meeting at the Southern Hotel in Columbus, Ohio, March 21.

**Rear Admiral Bartholomew W. Hogan,** Surgeon General of the Navy, participated in convocation ceremonies at the New York University Bellevue Medical Center in New York, March 4–5, in celebration of the Diamond Jubilee of the University Hospital.

**Dr. Seymour Alpert,** Associate Professor of Anesthesiology, George Washington University School of Medicine, was one of the guest speakers at the 30th Annual Spring Congress in Ophthalmology and Otolaryngology and Allied Specialties, sponsored by the Gill Memorial Eye, Ear and Throat Hospital in Roanoke, Virginia, April 1–6. Dr. Alpert conducted a morning clinic, April 3, on the subject, "Endotracheal Anesthesia for Surgery about the Face" and a second one in the afternoon on "The Use of Muscle Relaxants in Anesthesia for Eye, Ear, and Throat Surgery."

**Dr. Sol Katz,** Chief of the Division of Pulmonary Diseases at D. C. General Hospital, and Dr. Robert F. Donohoe, Instructor in Medicine, Georgetown University School of Medicine, co-authored a paper, read by Dr. Katz, February 12, before the 16th Conference on the Chemotherapy of Tuberculosis, sponsored by the Veterans Administration and Armed Forces in St. Louis, Missouri. The paper was entitled, "Hinconstarch in the Treatment of Acute Tuberculosis." Dr. Katz also discussed the subject of "Needle and Surgical Biopsy of the Pleura" at the same meeting.

On February 18, at the Atlanta Graduate Medical Assembly, in Atlanta, Ga., Dr. Katz gave two talks, one on "The Problem of the Solitary Nodule" and the other on "Pleural Effusion."

**Dr. Winfred Overholser,** Superintendent of St. Elizabeths Hospital, attended the 1957 National Health Forum held at the Hotel Netherland Hilton in Cincinnati, Ohio, March 20–22. The Forum is an annual activity of the National Health Council, made up of over 50 national health societies. The subject this year was "Better Mental Health: Challenge to All Health Services." Dr. Overholser gave one of the keynote addresses on "Helping People to Meet Crises."

In February Dr. Overholser addressed members of the National Advisory Committee to the VA's voluntary service programs. This group, which met in the Departmental Auditorium, February 11–13, discussed how community volunteers can best fit into VA medicine of the future, when the emphasis will be on the aging veteran with long-term chronic ailments. Dr. Overholser's address was given at a dinner meeting, February 11, at the Hotel 2400.

**Dr. Josephine J. Buchanan,** Chief of the Department of Physical Medicine and Rehabilitation, D. C. General Hospital, took part in the Ninth Annual Meeting of the American Academy of Occupational Medicine, held at the Shoreham Hotel in Washington, February 13–15. On the opening day she presented a paper on "The Practical Aspects of Rehabilitation in Industry."

**Dr. Leroy E. Burney,** Surgeon General of the Public Health Service, was a guest speaker at the Annual Dinner, February 14. In the absence from town of President Caulk of the D. C. Medical Society, registrants at the meeting were greeted in the name of the Society by its First Vice President, **Dr. Irving Burka.**

**Dr. Garnet W. Ault** participated in the Central Regional Meeting of the American College of Gastroenterology, held in Grand Rapids, Michigan, March 17, at the Hotel Pantlind. Dr. Ault's paper was on the subject, "The Problems of Adenomas, Cancer Isolation and Extended Dissection Relating to Cancer of the Distal Colon and Rectum."

**Dr. Howard M. Payne** gave several lectures at the Texas Postgraduate Medical Assembly in Prairie View, Texas, March 3, in the field of chest diseases and tuberculosis.

**Dr. Irving B. Brick,** Associate Professor of Medicine, Georgetown University School of Medicine, was elected to active membership in the Southern Society for Clinical Research at its annual meeting in New Orleans in January.

**Dr. Ellis April** was recently appointed Regional Consultant to the National Home for Asthmatic Children at Denver, Colorado.

**Dr. Henry P. Laughlin** participated in a Graduate Course on Psychiatry in Occupational Health for Physicians, held under the auspices of the Kettering Laboratory and the University of Cincinnati Medical School, in Cincinnati, Ohio, March 13. As a member of the faculty, Dr. Laughlin spoke on "Problems of the Executive."

The same day he addressed the Cincinnati Society of Neurology and Psychiatry on "Problems in the Treatment of the Executive."

**Dr. Marvin E. Perkins,** Chief of the Psychiatric Services Division, D. C. Health Department, attended a meeting of the Department of Public Health, Commonwealth of Pennsylvania, at Mont Alto Sanatorium, Mont Alto, Pennsylvania, March 1–4. Dr. Perkins addressed the members of the Department on "Human Aspects of Administration and Consultation in Public Health" and "Basic Factors in Human Behavior." He also led a group discussion on the latter subject.

**Dr. Benjamin Karpman** has resigned his post as senior psychotherapist at St. Elizabeths Hospital in order to devote himself to private practice and lecturing. He will continue on the staff of the Hospital in a teaching capacity. Dr. Karpman has been associated with St. Elizabeths since 1919, where he interned following his graduation from the University of Minnesota School of Medicine.

**Dr. Paul B. Cornely,** Medical Director of Freedmen's Hospital, and a member of the Board of Trustees of the D. C. Division of the American

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| January 27 | Dr. Anthony Zappala | Alcoholism | Adult Group, Keller Memorial Lutheran Church |
| February 27 | Dr. Julius Schreiber | Psychological Aspects of Dating | Channing Fellowship, University of Maryland |
| March 5 | Dr. Julius Schreiber | Mental Health and the Community | Washington Committee of the Menninger Foundation |
| March 9 | Dr. Winfred Overholser | Research in Mental Illness | Winners of Westinghouse Annual Science Talent Search |
| March 10 | Dr. Julius Schreiber | The Emotionally Healthy Family | Parents' Association, Sidwell Friends School |
| March 11 | Dr. Marvin E. Perkins | Our Children—What of Their Health and Well-being? | Mental Health Committee Workshop, D. C. Congress of Parents and Teachers |
| March 13 | Dr. Julius Schreiber | The Emotional Basis of Effective Marriage | Phi Alpha Alumni of Washington, D. C. |
| March 20 | Dr. Henry P. Laughlin | The Tranquilizers—Are They a Boon or a Menace? | Bethesda-Chevy Chase Ki-Wives |
| March 21 | Dr. Marvin E. Perkins | Emotional Stability for the Modern Woman | Business and Professional Women's Club of Washington, D. C. |
| March 28 | Dr. Henry P. Laughlin | New Frontiers of Mental Health | Adult Group, Mt. Olivet Methodist Church |
| April 16 | Dr. Paul F. Jaquet | Hazards of Self Medication | Catholic Daughters of America |

Cancer Society, was one of the judges for the 1956 Cancer Education Poster Contest, sponsored by the D. C. Division for students in the 10th, 11th and 12th grades. The awards, which were U. S. Savings Bonds, were presented to the winners in the name of Dr. Harry H. Kerr, one of the founders of the D. C. Division of the Society.

**Dr. Carolyn S. Pincock** was one of nine Washington women honored for their "outstanding spirit of togetherness in family and/or civic life." The "Togetherness Awards," in the form of silver bowls, were presented to these women at a luncheon, sponsored by the District of Columbia State Federation of Business and Professional Women's Clubs in coöperation with McCall's Magazine and the Hecht Company, held at the Hotel Statler, February 25. Among the women honored were Mrs. Richard M. Nixon, wife of the Vice President of the United States, and Mrs. Ivy Baker Priest, Treasurer of the United States.

**Dr. Herbert S. Gates** took office as President of the Kiwanis Club of Northeast Washington on January 1.

**Dr. George W. Hoover**, who now lives in Fort Lauderdale, Florida, writes that he would like his address inserted in the MEDICAL ANNALS so that some of his Washington colleagues will "be stimulated to write or look him up" when they are in his vicinity. His office address is 837 N.E. 20th Avenue, and his home is at 606 N.E. 17th Avenue. His home telephone number is Jackson 2-4685.

# MEMBERSHIP

The following applicants for membership will be voted on at the meeting of the Executive Board, April 22, 1957.

### *For Active Membership*

Roy E. Albert, New York University—1946
George Glass, University of Berlin, Germany—1919
Forest K. Harris II, George Washington University—1953
William L. Jamison, University of Virginia—1943
Gerard F. MacDonald, McGill University, Montreal, Canada—1942
J. Malcolm McNeill, Emory University—1951
Jorge B. Morales, Loyola University—1950
John T. Murray, Jr., Georgetown University—1952
Julian S. Sachs, University of Geneva, Switzerland—1954

### *For Associate Membership*

Eugene P. Campbell, Johns Hopkins University—1933
Edward J. Richards, University of Iowa—1955
Peter A. Santucci, Georgetown University—1951
Stanley M. Silverberg, George Washington University—1952
Myron E. Wegman, Yale University—1932
Lewis K. Woodward, Jr., University of Maryland—1935

### *For Resident-Intern Membership*

Herbert E. Lane, Jr., Georgetown University—1947
Vertis R. Thompson, Howard University—1952

The following applicants for membership will be voted on at the meeting of the Executive Board, May 27, 1957.

### *For Active Membership*

Clift P. Berger, Medical College of Virginia—1936
David M. French, Howard University—1948
Julian W. Giles, Howard University—1946
Stanley J. Haberek, New York Medical College—1949
Allan Hall, George Washington University—1952
Charles H. Hunter, Howard University—1950
Benjamin Jones, Jr., Howard University—1944
Cervera R. Little, Howard University—1935
Babgen Mangasarian, University of Teheran, Iran—1946
James R. Nugent, Georgetown University—1953
Burke Syphax, Howard University—1936
C. Allen Wall, St. Louis University—1951

### *For Associate Membership*

Aims C. McGuinness, Columbia University—1931
Irwin L. V. Norman, University of Minnesota—1928
Herbert L. Tanenbaum, Georgetown University—1952
Harold S. Tidler, George Washington University—1949

### *For Resident-Intern Membership*

Richard B. Perry, Georgetown University—1955
Elroy Young, Meharry Medical College, Nashville, Tenn.—1951

Recent changes in membership status:

### *Active to Associate*

John B. Brady
Henry F. Cappozzella
George A. Courie
Arthur T. Davidson
Cecile F. Fusfeld
Louis J. Maciulla
Vincent L. O'Donnell
Wendell A. Parker
Russell C. Payne
Leon Seley
Richard L. Siggers
Celia White Tabor

### *Active to Affiliate*

Robert J. O'Donnell
William Tenenblatt

### *Active to Resident-Intern*

John W. Winkler, Jr.

### *Affiliate to Associate*

Carolyn S. Pincock

### *Resident-Intern to Associate*

John E. Cassidy
Dean H. Martin
Murray Paul

### *Resigned*

#### *Active*

William D. Byrne
Eugene deSavitsch
Leon J. Epstein
Beryl C. Kester
Raymond Stoller

#### *Associate*

Theodore H. Chuang
Eloise B. Cram†
Robert Oden
Arthur I. Sims

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† Died February 9, 1957

# BOOK REVIEWS

**The Patient Speaks—Mother Story Verbatim in Psychoanalysis of Allergic Illness.** Harold A. Abramson, M.D., Associate Attending Physician and Chief of the Allergy Clinic, The Mount Sinai Hospital, New York City; Research Psychiatrist, Biological Laboratory, Cold Spring Harbor; Consultant, Huntington Hospital; Assistant Clinical Professor of Physiology, Columbia University; Consultant (Psychology), Department of the Army. Price, $3.50. Pp. 239. New York: Vantage Press, 1956.

This is a verbatim report of the psychotherapy of a young lady with asthma; to be specific, it is a series of those verbatim reports which relate only to the mother-daughter relationship in a patient with asthma.

The Foreword states that the patient's story raises many questions "but answers them only in part." This seems to be a very generous appraisal of the whole volume.

Robert P. Nenno, M.D.

**Clinical Use of Radioisotopes.** William H. Beierwaltes, M.D., Associate Professor of Internal Medicine and Coördinator, Clinical Radioisotope Unit, University Hospital, Ann Arbor; Philip C. Johnson, M.D., Assistant Professor of Internal Medicine and Chief, Radioisotope Unit, Veterans Administration Hospital, University of Oklahoma Medical School, Oklahoma City; and Arthur J. Solari, B.S., M.S. (Physics), Instructor in Radiation Physics, Department of Radiology, Radiation Physicist for Clinical Radioisotope Unit and Kresge Research Isotope Unit, University Hospital, Ann Arbor. Price, $11.50. Pp. 456, with 126 illustrations. Philadelphia: Saunders, 1957.

Atomic medicine is 10 years old, large for its years and growing daily. Since 1946 radioisotopes have been available from the AEC for research and clinical use in ever increasing number and amount. This book is an attempt at both a present balance sheet in a rapidly changing field and a practical text for medical students and practitioners who desire training in the medical uses of radioisotopes.

A wide variety of clinical isotope work is reviewed with the emphasis on the clinic rather than the laboratory. For example, half of the book is devoted to the use of $I^{131}$ in the diagnosis and treatment of diseases of the thyroid gland.

The book has most value in those discussions (thyroid disease) when the authors are relating their own experience at Ann Arbor. It is least valuable when they indiscriminately cite some references on brain tumor localization and diagnosis of acquired cardiac lesions and leave the impression that these are practical clinical isotope procedures. They are not.

This is the only book which has all necessary information for the beginner in radioisotope work. The training, administrative and radiation safety sections are invaluable to those interested in the establishment of a hospital isotope laboratory.

The text is well and clearly composed and Saunders has done an excellent job of printing. This book deserves to find its place in the medical libraries of some medical students, most isotope laboratory workers, and those family physicians who would like a present report on the developing field of atomic medicine.

B. J. Duffy, Jr., M.D.

**Practitioner's Conferences Held at The New York Hospital-Cornell Medical Center,** Volume 4. Edited by Claude E. Forkner, M.D., F.A.C.P., Professor of Clinical Medicine, Cornell University Medical College; Attending Physician, The New York Hospital; Consultant in Medicine (Hematology), Roosevelt Hospital. Pp. 407. New York: Appleton, 1956.

This is a highly profitable volume presenting a wide range of subjects, all of which are of some interest to the general practitioner. Each chapter, which has a reading time of 40 to 50 minutes, covers a clinical conference in New York Hospital-Cornell Medical Center. These conferences, conducted by a panel of experts, cover their topic very completely and yet with an air of informality, which adds greatly to their readability.

Of the topics covered, I thought that the conference on Pulmonary Hypertension was the most informative, and the conference on Fractures of the Hip the most helpful, in that, while the care of a hip fracture is in the province of the orthopedist, the generalist, who frequently must treat other manifestations of disease in these elderly patients, can do so more intelligently with a knowledge of the orthopedic problems.

At the end of each chapter there is an outline of the entire conference, thus allowing the reader to put what he has learned in its proper focus and perspective.

Stephen J. Sheehy, M.D.

**Diseases of the Heart,** 2nd edition. Charles K. Friedberg, M.D., Attending Physician, The Mount Sinai Hospital, New York; Associate Clinical Professor of Medicine, College of Physicians and Surgeons, Columbia University. Price, $18.00. Pp. 1161, with 157 illustrations. Philadelphia: Saunders, 1956.

This book is very well written. It is quite adequate in every practical aspect of the subject. No glaring weaknesses could be detected. Chapter 46 on Functional Manifestations Referred to the Heart and chapter 49 on Insurance and Medicological Problems in Cardiac Disease seem to be somewhat skimpy. Treatment of the emotional status of the cardiac patient is barely touched upon. Format, typography and illustrations are good. The book can be recommended without reservation to generalists and internists.

W. M. Y.

**The Philosophy of Medicine.** William R. Laird, M.D. Price, $3.00. Pp. 64. Charleston, W. Va.: Education Foundation, Inc., 1956.

Since every physician is confronted daily with the stuff of which human life is made, in all its facets, ugly to sublime, it is imperative that he develop a philosophy to cope with what he sees and is required to do. It is therefore surprising that few books have come to the Medical Society's offices which are of a philosophical nature. Recently, such a one has appeared, under the above title, written by Dr. Laird, who is founder and Chief Surgeon of the Laird Memorial Hospital in Montgomery, West Virginia.

The book is an outgrowth of luncheon meeting conversations between Dr. Laird and his staff. Several days each week, prior to the formal program, a 30-minute period is devoted to a discussion of "everything under the sun except personalities."

Dr. Laird states that this is not a book, but merely "notes" which he has published because so many of his surgical residents have asked for them. There are five chapters with indicative titles: The Philosophy of Medicine, Esthetics, Ethics, Politics, and Metaphysics. The Annals has secured permission from Dr. Laird and the publisher to reproduce parts of the chapters as editorials during the next few months. The book would make a particularly fine memento to a graduating medical student.

A. L. E.

**The Neuroses in Clinical Practice.** Henry P. Laughlin, M.D., Assistant Clinical Professor of Psychiatry, George Washington University School of Medicine; Head, Psychiatry and Neurology Division, Suburban Hospital, Bethesda, Maryland; Consultant in Psychiatry, Walter Reed Army Medical Center. Price, $12.50. Pp. 802. Philadelphia: Saunders, 1956.

In a field where we are presented with an abundance of literature of every degree of complexity, depth, length, and school, something new and different deserves the praise and attention which Dr. Laughlin's book is receiving. It is refreshing in its derivation directly from clinical practice. It differs from many texts, on the one hand, in the avoidance of mere descriptive material, and, on the other, in the absence of interpretive clichés rephrasing what has already been said.

The book begins, where a treatise in the field of psychiatry quite properly should begin, with a discussion of anxiety. The practical reality of the presentation is emphasized with a discussion in the first chapter of "a yardstick for measuring emotional health." This emphasis on degree of illness and differentiation of normal from pathologic continues throughout the book. In developing his theory, Dr. Laughlin views anxiety from multiple dynamic vantage points. This combination of descriptive, theoretical, practical, comparative, developmental, and integrative is characteristic of his approach.

Chapter 2 is a development of the clinical aspects of anxiety neurosis. Here the role of anxiety as a primary phenomenon of mental illness is considered in those settings where it is most immediately operative. The approach to recognition, differentiation, and management is wholly practical. The orientation is such that the general practitioner should find this manner of presentation extremely useful.

There follows an excellent discussion of the mechanism of ego defense. Again the emphasis is on the significance of anxiety, and the operational patterns developed to defend the ego against awareness of anxiety. Twenty-one major ego defense mechanisms are described followed by a brief discussion of 14 "minor" patterns. Subsequent chapters are to a large extent based on these defense mechanisms, with the dynamics of individual neuroses considered in terms of recognition, associated phenomena, and especially methods of approach. Here clinical entities as presently accepted in official nomenclature are dealt with. In addition, Dr. Laughlin again demonstrates the practicality of the book by adding chapters which deal with clinical syndromes, such as "The Fatigue Reactions," "Overconcern with Health," and "The Neuroses Following Trauma."

There is a separate chapter on Depression considered as a broad phenomenon over and above defined clinical categories. Here the author reviews depression historically, even back to Adam. The approach is holistic, with emphasis on degree, secondary significance, and protean forms of clinical syndromes involved. The discussion of symptoms and clinical features is especially noteworthy.

Is the book oriented toward the general practitioner and the specialist in fields other than psychiatry or the psychiatrist? The author does not specify. The text is highly readable and certainly adequate for the needs of the generalist except those who block on any dynamic discussion of "functional" disorders. It might be argued that for the psychiatric specialist it does not go far enough. As a basic psychiatric text it would prove of great value and I doubt if anyone is so well versed in the field he would not find the presentation especially thought-provoking and profitable. On the other hand, some might say that for the non-psychiatrist it goes too far, making depth psychotherapists of every physician. I have never felt this concern a real danger to the intelligently conservative practitioner. Reading a surgical text isn't going to lead the doctor beyond his depth in surgery until he knows he has the experience and knowledge to proceed. This text provides him with a perspective, a basic foundation, and an understanding of what goals are possible within the framework of present knowledge. It is oriented only toward the neuroses, as the title suggests, with consideration only of those entities seen commonly in private office practice. Dr. Laughlin has produced a broadly useful basic handbook valuable to both the psychiatrist and other medical practitioners.

John D. Schultz, M.D.

## CORRESPONDENCE

Washington, D. C., February 18, 1957

To Mr. Wiprud:

Re: Painters Trust Fund

In behalf of the trustees of the above health and welfare fund, and at their request, I am, without reference to personalities involved, inviting your attention to 2 recent cases where medical certification of disability on regular forms provided by the administrators of the fund has given claimant sanction to misrepresent benefit claims. Each case has resulted in payment of weekly disability benefits for 'loss of time,' though restitution in full has been made by the beneficiary in one instance.

In each instance, despite the medical certification of 'totally disabled and prevented from performing all the duties of his occupation' for specified periods of time, with dates inserted by the physician, the claimant was found, upon investigation, to have been regularly employed on a full-time basis by a contributing contractor during the certified periods.

I have discussed the general problem presented with an assistant in the Office of the United States Attorney, with specific reference to the applicability of Title 22, section 1301 'False Pretenses' (Crim. Stat. D.C. Code 1940 ed as amended). No formal complaint or charges have been presented in either instance, nor is such action contemplated.

However, the assistant in question was of the opinion that criminal action would be possible under this statute, especially where money is paid directly to the certifying physician.

It is not unreasonable to assume that in the 2 cases here being discussed, the physicians acted carelessly rather than maliciously, and that there was no intent to defraud; nevertheless, the trustees feel that the implications and possible consequences of such negligence or carelessness should be a matter of institutional concern of your professional association.

Under these circumstances, I wonder if you can bring this matter to the attention of the appropriate committee of your Society and to the membership at large through your periodic publication or other facets of general distribution or circulation in the profession.

Very sincerely yours,
B. Paul Noble
*Attorney at Law*

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**The Care of the Expectant Mother.** Josephine Barnes, M.A., D.M. (Oxon.), M.R.C.P. (London), F.R.C.S. (England), F.R.C.O.G., Assistant Obstetrician and Gynaecologist, Charing Cross Hospital and Elizabeth Garrett Anderson Hospital; Surgeon, Marie Curie Hospital. Price, $7.50. Pp. 270. New York: Philos. Libr., 1956.

**The Clinical Management of Varicose Veins,** 2nd edition, revised and enlarged. David Woolfolk Barrow, M.D., Professor of Surgery, Marquette University School of Medicine; Assistant Director of Surgery, Milwaukee County Hospital, Milwaukee; with a Foreword by Arthur W. Allen, M.D., Former Chief, East Surgical Service, Massachusetts General Hospital, Boston. Price, $6.00. Pp. 169, with 70 illustrations. New York: Hoeber-Harper, 1957.

**Fundamental Marriage Counseling—A Catholic Viewpoint.** John R. Cavanagh, M.D., Fellow of the American College of Physicians; Fellow of the American Psychiatric Association; Knight of St. Gregory; Diplomate of the American Board of Neurology and Psychiatry; special lecturer in the School of Sacred Theology, Catholic University of America; member of the Commission on Mental Health, District of Columbia; lecturer in mental health, Trinity College; former lecturer in psychiatry, National Catholic School of Social Service; former Commander, Medical Corps, United States Navy. Price, $8.00. Pp. 598. Milwaukee: Bruce, 1957.

**Current Therapy 1957 — Latest Approved Methods of Treatment for the Practicing Physi-**

**cian.** Edited by Howard F. Conn, M.D. Consulting Editors: George E. Burch, M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, Perrin H. Long, Clarence S. Livingood, H. Houston Merritt, Walter L. Palmer, Hobart A. Reimann, Cyrus C. Sturgis, and Robert H. Williams. Price, $11.00. Pp. 731. Philadelphia: Saunders, 1957.

**Anesthesia for Surgery of the Heart.** A Monograph in The Bannerstone Division of American Lectures in Anesthesiology. Kenneth K. Keown, M.D., F.A.C.A., Associate Professor of Anesthesiology, Hahnemann Medical College and Hospital, Philadelphia, Pennsylvania; Senior Anesthesiologist, Bailey Thoracic Clinic, Philadelphia, Pennsylvania; Member of the Board of Governors of the American College of Anesthesiologists; Diplomate, American Board of Anesthesiologists, Inc.; Lecturer on Anesthesia for Intracardiac Surgery for Refresher Courses of the American Society of Anesthesiologists, Inc. Edited by John Adriani, M.D., Director, Department of Anesthesia, Charity Hospital, New Orleans, Louisiana. Price, $3.75. Pp. 109. Springfield, Ill.: Thomas, 1956.

**Coronary Heart Disease: Angina Pectoris; Myocardial Infarction.** Milton Plotz, M.D., F.A.C.P., Clinical Associate Professor of Medicine, State University of New York, Medical Center at New York; Physician, Kings County Hospital, Goldwater Memorial Hospital, and Brooklyn State Hospital. Foreword by William Dock, M.D. Price, $12.00. Pp. 353, with 107 illustrations. New York: Hoeber-Harper, 1957.

**Manual of Anesthesiology for Residents and Medical Students.** A Monograph in The Bannerstone Division of American Lectures in Anesthesiology. Herman Schwartz, M.D., S. H. Ngai, M.D., and E. M. Papper, M.D. From the Anesthesiology Service, The Presbyterian Hospital, and Department of Anesthesiology, Columbia University, College of Physicians and Surgeons, New York, New York. Edited by John Adriani, M.D., Director, Department of Anesthesia, Charity Hospital, New Orleans, Louisiana. Price, $3.75. Pp. 170. Springfield, Ill.: Thomas, 1957.

**General Urology.** Donald R. Smith, M.D., Clinical Professor of Urology and Chairman of the Department of Urology, University of California School of Medicine, San Francisco; Consulting Urologist, San Francisco Hospital, Consulting Surgeon (Urology), Veterans Hospital, San Francisco; Chief of the Department of Urology, St. Luke's Hospital, San Francisco. Illustrated by Ralph Sweet. Price, paper, $4.50. Pp. 328. Los Altos, Calif.: Lange, 1957.

**Ciba Foundation Symposium on the Nature of Viruses.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H.W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $8.00. Pp. 292, with 57 illustrations. Boston: Little, 1957.

**Ciba Foundation Symposium on Ionizing Radiations and Cell Metabolism.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $9.00. Pp. 318, with 48 illustrations. Boston: Little, 1956.

## CYRUS WHITNEY CULVER, M.D.
## (1886–1957)

Dr. Cyrus Whitney Culver, a Washington physician for more than 37 years, died suddenly, March 17, 1957 at his home at 5713 Chevy Chase Parkway, N.W.

Born in Colton, New York, March 9, 1886, Dr. Culver was the son of a physician, Dr. David J. Culver, and Harriett M. Fairbanks Culver. He attended Colgate Academy in Hamilton, N. Y., and received his degree in medicine from McGill University, Montreal, in 1910. He interned the following year at St. Lawrence Hospital in Montreal. He practiced for several years in Hammond and Lowville, New York, and in 1916 was President of the Lewis County (New York) Medical Society.

Dr. Culver served as a medical officer in the U. S. Army during World War I. Following the War, he opened his offices for general practice in Washington. For the next 10 years, from 1919 to 1929, he was director of the Outpatient Obstetrical Service at George Washington University Hospital and Clinical Instructor in Obstetrics at the Medical School.

In 1920 he was elected to Active membership in the Medical Society of the District of Columbia. He was a member of the American Medical Association, the Southern Medical Association, and the George Washington University Medical Society. He was also a member of the Chevy Chase Citizens' Association, the Masons, and the Knights of the Round Table. He was affiliated with the Chevy Chase Baptist Church.

He is survived by his wife, Mrs. Florence Galley Culver; two sons, Ralph J. Culver, of San Francisco, California, and Norman W. Culver, of Fairfax, Virginia; a brother and a sister, Miss Florence E. Culver and David Jay Culver, both of New York.

## LYLE MILLAN MASON, M.D., F.A.C.S.
## (1891–1957)

Dr. Lyle M. Mason, Washington urologist for many years, died, February 13, 1957, at Garfield Memorial Hospital following an illness of several months. His offices were at 1835 Eye Street, N.W.

Dr. Mason, the son of John P. H. and Anita Millan Mason, was born, May 4, 1891, at Accotink in Fairfax County, Virginia. After attending the Fairfax County Public Schools, he enrolled at George Washington University, graduating in medicine in 1918. He interned at George Washington Hospital and took a residency at Columbia Hospital for Women. In 1931 he went abroad for study in Vienna, Austria. Upon returning to Washington, Dr. Mason limited his practice to urology.

He was attending surgeon in urology at Garfield Memorial Hospital and consulting surgeon in urology to St. Elizabeths Hospital.

Dr. Mason had been a member of the District Medical Society since 1920. He was a Fellow of the American College of Surgeons, a member of the American Urological Association and the Washington Urological Society. He also belonged to the Army-Navy Country Club.

Survivors are his wife, Mrs. Evelyn Brewer Mason, of the home address, 4716 Ellicott Street, N.W., a sister and three brothers: Miss Ethel Mason, of Bethesda, Maryland; the Reverend Phillip Mason, of Boswell, Virginia; T. Bentley Mason, of Milan, Michigan; and Worcester Mason, of Toledo, Ohio.

## VALENTINE MARTIN HESS, M.D., F.A.C.S.
## (1897–1957)

Dr. Valentine M. Hess, well known Washington surgeon, died, March 16, 1957, at Providence Hospital, where he was a staff member. He occupied offices in the Farragut Medical Building with his brother, Dr. Frederick J. Hess, a dental surgeon.

Dr. Hess, a Washingtonian, was born, October 14, 1897, to Frederick P. and Magdalina M. Hess. He received his early education at St. Joseph's Parochial School and Gonzaga High School, and he attended Georgetown University. He graduated in medicine from Temple University in 1925, serving his internship at Temple University Hospital, Philadelphia, the following year, and he stayed on the Hospital staff until 1930 as Associate in Surgery.

Dr. Hess served on the faculty of Georgetown University School of Medicine as Associate Professor of Surgery from 1935 to 1945. He was on the staff of all the Washington hospitals and Chief of Surgery at Providence Hospital since 1937.

He became an Active member of the D. C. Medical Society in 1931 and took part in many of its activities. At one time he was Chairman of the Public Relations Committee. He was a Fellow of the American College of Surgeons, a member of the American Medical Association, Southern Medical Association, International Medical Society, American Therapeutic Society, Washington Academy of Surgery, and the Pan American Medical Society. He also belonged to the University Club, the Corinthian, Capital and West River Yacht Clubs, and the Touchdown Club. He was also active in the John Carroll Society and the Merrick Boys' Club.

Dr. Hess was not married. He lived with his sister, Miss Helen M. Hess, at 4721 Tilden Street, N.W. He also leaves two brothers, the Reverend Carl F. Hess, pastor of Our Lady of Victory Church, and Dr. Hess, mentioned above, who lives at 3920 49th Street, N.W.

## JOHN CHARLES REISINGER, M.D.
## (1901–1957)

Dr. John Charles Reisinger, specialist in internal medicine, died, March 5, 1957, at George Washington University Hospital.

A native of Rockville, Maryland, Dr. Reisinger was born, August 23, 1901. After graduating in medicine from George Washington University in 1927, he interned at the University Hospital the following year. From 1928 to 1930 he was House Medical Officer and Assistant Resident in Medicine at Johns Hopkins University Hospital in Baltimore, and from 1930 to 1931 was Assistant in Medicine at Johns Hopkins School of Medicine.

Dr. Reisinger taught at George Washington

University from 1931 to 1935 and was on the staff of Emergency Hospital from 1934 to 1944. Since then he had been in private practice at 2025 Eye Street, N.W. Dr. Reisinger was a medical advisor to the District Branch of the Selective Service System.

Dr. Reisinger became an Active member of the Medical Society of the District of Columbia in 1932. He was a member of the American Medical Association, the Southern Medical Association, and the Washington Heart Association. He was a member of St. Alban's Episcopal Church.

Survivors are his wife, Mrs. Florence R. Reisinger, of the home address, 1601 Argonne Place, N.W.; a sister, Miss Dorothy E. Reisinger, of 2032 Belmont Road, N.W.; and a brother, J. Albert Reisinger, of Miami, Florida.

### Cervical Smear for Carcinoma—Nelson, Nicklas and Winship

(*Continued from page 174*)

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5. Lombard, H. L., Middleton, M., Warren, S., and Gates, O.: Use of vaginal smear as screening test. New England J. Med., 1952, **246,** 523.
6. Kraushaar, O. F., Bradbury, J. T., and Brown, W. E.: Vaginal smear in population screening for uterine carcinoma. Am. J. Obst. & Gynec., 1949, **58,** 447.
7. Memorandum, Department of Health, Education and Welfare, August 6, 1956. To: All Women Employees in Headquarters Building. Subject: Test for Cancer of the Uterus (Womb).

### Combined Achalasia and Pyloric Stenosis—Blades, Adkins and Gwathmey

(*Continued from page 182*)

10. Nemir, P., Jr., and Hawthorne, H. R.: J. Thoracic Surg., 1954, **28,** 247.
11. Hurst, A. F., and Rake, G. W.: Quart. J. Med., 1930, **23,** 491.
12. Schwartz, S. I., and Dale, W. A.: Ann Surg., 1955, **142,** 1002.
13. Swenson, O.: Surgery, 1947, **22,** 324.
14. Leven, N. L., Varco, R. L., Lannin, B. G., and Tongen, L. A.: Ann. Surg., 1952, **136,** 701.
15. Chiabi, J. S., in Raia, A., and others.[1]

### Complaints—How to Make Them—Observer

(*Continued from page 196*)

selves we should be explicit and courteous, not incoherent and abusive if we want the attention we think we deserve from the officers of our association."

The above is from an editorial—"How to Complain"—which appeared in the *World Medical Journal,* official publication of the World Medical Association, in its January, 1957 issue.

Those who make complaints in writing, the Journal observes, might well consider the suggestions made by "a special private citizens' committee" to people who write their Congressmen. They are, in the *Journal's* opinion, "applicable to almost anyone," including medical societies. Here they are:

"1. Write on a specific issue or principle and don't try to cover more than one in a letter.

2. Be brief. Tell your point of view and your reasons.

3. Don't follow a form letter. Give your own ideas in your own way. It is the straightforward, sincere letter that commands attention.

4. Be friendly and courteous. Don't be abusive.

5. Don't use carbon copies. Write to each one individually.

6. Write a 'thank you' note when one of these men does something you like. They are often criticized, seldom praised.

7. Be sure to sign your letter legibly and give your address."

T. W.

MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI *May*, 1957 NUMBER 5

# OPERABLE CONGENITAL MALFORMATIONS OF THE HEART*

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IMPORTANT PROGRESS has been made during the last decade in the diagnosis and treatment of congenital heart disease. Therefore, it is the purpose of this series of papers to present a brief and, it is believed, timely review of the operable congenital malformations of the heart. The presentation will be divided into 4 parts: (1) congenital cardiac abnormalities as observed in the newborn and infant, (2) in the young and school-age child, (3) in the adult, and (4) in patients having certain rare and unusual malformations irrespective of age. The several lesions will be discussed individually with regard to the pertinent history, physical findings, and laboratory data. Remarks relevant to the differential diagnosis will be followed by a brief mention of the surgical procedures indicated in each instance.

## PART I. CONGENITAL MALFORMATIONS IN THE NEONATAL PERIOD AND INFANCY

From a cardiac standpoint one should have accurate information on a number of important items in the history and physical examination. Detailed attention to certain specific diagnostic procedures should also be given. The history of spells of cerebral anoxemia and their exact nature, the time of onset of symptoms of congestive failure, and the presence and character of feeding difficulties should be noted.

It is important when examining an infant that he not be disturbed until one has observed the character of the second heart sound and the presence or absence of a murmur, as well as its character, duration and transmission. It should be noted whether the second heart sound is increased or decreased in intensity, and if it is pure or impure. The presence or absence of a murmur, its duration and intensity, and whether it is heard over the back with the same degree of intensity as anteriorly are essential. If cyanosis is present its character and distribution should be observed, and in particular whether it is frank cyanosis or a grayish, circumoral pallor. It is essential to appreciate a difference in the degree of cyanosis between the hands and the feet and to notice whether it increases or decreases with crying. Of importance also are the character of the pulses, the temperature, the pulse and respiratory rates, the presence of liver enlargement, rales or peripheral edema, and the blood pressure in all extremities with the use of the flush technic.[1] The balance of the physical examination should include attention to the points covered in a pediatric evaluation. There are a number of conditions in the neonatal period, including atelectasis, emphysema and bronchopneumonia, which must be differentiated from a congenital cardiac malformation.

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* This is the first of a series of four articles on this subject.

† Fellow in the Department of Pathology, Children's Hospital, Washington, in 1955–56.

Care in questioning is of importance if the fine differences which make it possible to distinguish these lesions are to be appreciated. Only if one carefully observes every case, can the wide variations within normal limits be appreciated.

An electrocardiogram should be taken in each instance including the extremity and precordial leads at half standardization. It is important that there be no connection between the jelly placed at the various positions for the precordial leads, else one may resemble another. In infants and young children lead $V_8$ may be of definite value.

Useful information cannot be obtained from fluoroscopic examination of an infant unless the eyes are thoroughly accommodated. Also the milliamperage must be adjusted for this young age group. The lung fields in an infant are deceptively clear in any case, and the coöperation of the baby may be obtained with difficulty. One is chiefly interested in the presence or absence of a pulmonary artery and, if present, the character of its pulsation and the pulmonary vascular markings. Information concerning chamber enlargement and the presence of retroesophageal vessels can also be studied on good X-ray films.

Catheterization in infants is usually not possible through the median basilic vein. Therefore, the saphenous vein is most commonly chosen, a small catheter being used. When this route is utilized it is difficult to enter the pulmonary artery. Also, it is frequently not easy to interpret the catheterization findings. If the pulmonary artery is entered in an infant with pulmonic stenosis the child may die promptly. Angiocardiography is even more dangerous in a small child. No infant should either be catheterized or have angiocardiograms made unless there are clear-cut indications and only if facilities are optimal.[2] On the other hand, if a piece of essential information is needed which can only be obtained by one of these procedures, it should be carried out. Retrograde aortography should be used only to answer specific questions; e.g., it may be of definite value in differentiating a patent ductus arteriosus.

## Transposition of the Great Vessels

In transposition of the great vessels the aorta arises from the right ventricle and the pulmonary artery from the left ventricle, with a communication between the 2 circulations via the auricular septum, ventricular septum or ductus arteriosus. One, 2, or all types of communication may be present.

An infant with this malformation frequently has no difficulties the first week or 2 of life, or there may be cyanosis at birth. The degree of cyanosis depends on the size of the communication between the 2 circulations. When it is severe, a history of anoxemic attacks may be present. The baby may take feedings poorly. The onset of congestive failure is characterized by an increase in the respiratory rate. The congestive failure is predominately left-sided and early it is rather difficult to differentiate from bronchopneumonia. Rales are usually, but not necessarily, present.

The second heart sound at the base is of normal intensity, and a murmur is usually present; if it is moderately loud, one should suspect an associated ventricular septal defect, and if very loud, pulmonic stenosis. The cyanosis is usually moderate to severe, and if a patent ductus arteriosus is present there may be a little more cyanosis of the feet than of the hands, although differential cyanosis between the upper and lower extremities is difficult to evaluate in an infant. The volume of the pulses and the blood pressures are normal. Respirations are increased and rales may be present because of the increased pulmonary blood flow.

The electrocardiogram shows evidence of right ventricular enlargement. Although the right auricle is enlarged, evidence of this is usually not prominent in the tracing. An X-ray or fluoroscopic examination reveals a contour which is rather characteristic with narrowing of the great vessels at the base and a globular contour of the heart.[3] A prominent feature of this lesion is that, although the heart may be normal at birth, it enlarges rather rapidly, and frequently the first roentgenogram taken may show enlargement. There are few congenital malformations which show actual enlargement of the heart at birth. Special procedures are usually not necessary to make the diagnosis.

Lesions which must be considered in the differential diagnosis are aortic atresia, truncus arteriosus with pulmonary arteries arising from the common trunk, single ventricle with transposition, ventricular septal defect including Eisenmenger complex, and complete anomalous drainage of the pulmonary veins. The normal pulse, normal second heart sound, and typical X-ray appearance should differentiate transposition of the great vessels.

The operation indicated at this time is the creation of an auricular septal defect as a temporary procedure. A switch-over operation of the great vessels carrying the left coronary artery with the aorta seems to be the most promising procedure for permanently correcting this lesion.[4] If pulmonic stenosis is present and of moderate degree an anastomosis should be created.

## LARGE PATENT DUCTUS ARTERIOSUS

The ductus arteriosus runs from the aorta distal to the origin of the left subclavian artery and joins the pulmonary artery at the bifurcation of its two main branches. Unless pulmonary hypertension is present, blood flows from the aorta into the pulmonary circulation. If the ductus is large the volume of blood shunted from the systemic circulation into the pulmonary circuit may be enormous.

The history is one of rapid respirations, difficulty in feeding, and frequent respiratory infections. There is no history of cyanosis. Growth and development may be retarded.[5, 6] A severe degree of left-sided congestive failure is often the presenting symptom.[7]

On physical examination the respiratory rate is found to be increased and the pulses full. A systolic or continuous murmur is usually present. Under the age of 1 year a systolic murmur often occurs alone, rather than accompanied by a diastolic component. A typical continuous murmur is usually audible by 18 months.[8] Very rarely the heart sounds are normal. When present, the murmur is well heard in the back. Occasionally it has its maximal intensity at the lower end of the sternum or at the apex.[9] Even in the presence of a tachycardia or congestive failure there is a wide amplitude of the peripheral pulse pressure. The second heart sound at the base is accentuated, and left-sided congestive failure occurs early.

The electrocardiogram is usually normal or may show left ventricular preponderance. If right ventricular preponderance is present, another lesion, or pulmonic insufficiency secondary to a dilated pulmonary artery, must be ruled out. Roentgenologic and fluoroscopic examinations show an enlarged heart and congested lung fields with increased amplitude of the pulsations of the pulmonary artery, aorta and left ventricle. Evidence of left auricular enlargement may be demonstrated by a barium swallow.

The lesions to consider in the differential diagnosis during infancy are atrial septal defect, ventricular septal defect including an Eisenmenger complex, and single ventricle with transposition. Right ventricular preponderance is usually present in these lesions. A high ventricular septal defect communicating with the outflow tract of the right ventricle is very difficult to distinguish from a large ductus.[6] The character of the pulses differs slightly. However, if there is any doubt an aortogram will demonstrate the ductus.[10]

If the infant cannot be maintained by digitalization, division and ligation of the ductus should be performed before the child is critically ill.[11] Depending on the facilities available the operation may be done in infancy as soon as the diagnosis has been made.[12]

## Vascular Ring

Vascular rings about the trachea and esophagus may be caused by a double aortic arch, a right aortic arch with a left ligamentum arteriosus, and vascular anomalies of the branches of the aortic arch.

Symptoms of stridor and dysphagia occur during the first few months of life. Head retraction and respiratory distress while swallowing food are often associated symptoms.[13] Obstructive cyanosis may occur, and there is often a history of repeated respiratory infections.

The relevant physical findings are related to the respiratory system. Respirations may be rapid with intercostal and suprasternal retractions. A loud wheeze may be heard without the aid of a stethoscope, and the respirations may be "crowing" with marked inspiratory and expiratory stridor. An X-ray film of the chest frequently shows poor or irregular aeration during inspiration and hyperaeration of the lung fields during expiration. The diagnosis is established by an esophagram.[14, 15]

The surgery indicated is division of the constricting vessel or displacement of an artery in order to provide space for the trachea or esophagus.[16] It is of great importance to anchor the aorta to the sternum anteriorly.

## Preductal Coarctation of the Aorta

In an infantile or preductal coarctation there is a diffuse narrowing of the lumen of the aorta between the left subclavian artery and the point of entrance of the ductus arteriosus.

Infants with this malformation have a history of an early onset of feeding and respiratory difficulties and congestive failure which is predominately right-sided. Cyanosis may or may not be present; if present, an associated defect is frequently found. About half of the patients with a preductal coarctation have, in addition to a ductus arteriosus, another lesion. Cardiac enlargement may become evident shortly after birth.

On physical examination respirations are increased and the second heart sound is of normal intensity; the femoral pulses are palpable, but the blood pressure by the flush technic will be found to be lower in the legs than in the arms. A difference of more than 15 points should be present. Differential cyanosis of the hands and feet is sometimes observed. In two-thirds of these patients a systolic murmur is heard.[17]

The electrocardiogram may show right ventricular preponderance, but evidence of left ventricular enlargement may develop shortly after birth.[18] The X-ray films show right ventricular enlargement. There is normal vascularity of the lung fields. If there is any doubt about the diagnosis an aortogram may be helpful.

Lesions which should be considered in the differential diagnosis include adult coarctation, aortic atresia, single ventricle, and anomalous pulmonic venous return. If the blood pressure is taken routinely in all infants in both arms and legs this lesion should not be missed.

The operation indicated is excision of the coarctation, the surgeon making certain to clamp the proximal portion of the aorta and the distal portion of the ductus simultaneously.[19] The ductus should not be ligated prior to removing the coarctation.

In the adult type of coarctation a localized constriction occurs just distal to the point of entrance of the ductus arteriosus. The symptoms and physical signs are similar to those of a preductal coarctation but are usually of a less severe degree. The electrocardiogram more frequently shows right than left ventricular preponderance, and occasionally the tracing is within normal limits.[17, 18] Under the age of 1 year an aortogram is helpful in differentiating between the preductal and postductal types of coarctation.[17] Infants with the adult type of coarctation usually respond to conservative measures even if they have an episode of failure in early life,[20,21] and every effort should be made to tide them over and delay surgery until the age of 5 or 6 years.

### SINGLE VENTRICLE WITH TRANSPOSITION

In this malformation the ventricular portion of the heart consists of a single large cavity with a smaller rudimentary outlet chamber. The great vessels are transposed so that the aorta arises from the rudimentary outlet chamber and the pulmonary artery from the main ventricular cavity. The pulmonary artery is considerably larger than the aorta so that a large volume of blood is shunted through the pulmonary circulation.

There is early onset of feeding and respiratory difficulties and retardation in growth and development. Mild cyanosis is usually, but not necessarily, present. Cardiac enlargement does not occur early. The time of onset of congestive failure, which is left-sided, varies.

Physical examination reveals a child with a normal or slightly accentuated second heart sound and a normal pulse and blood pressure. A systolic murmur is usually present. Cyanosis may be intensified when the infant cries, and the respiratory rate is increased.

The electrocardiogram usually shows right axis deviation and evidence of right ventricular hypertrophy,[22] although left ventricular preponderance may be present. The contour of the heart in the anteroposterior position closely resembles a transposition; a persistent bulbus cordis (rudimentary outlet chamber) is usually present, and the heart is swung to the right as may be the case in any primitive heart. The vascularity of the lung fields is usually increased. In the left anterior oblique position there is a distinct flattening of the anterior contour.[23] If there is any question about the diagnosis, and good catheterization facilities are available for infants, the child should be catheterized, observing the position of the catheter on fluoroscopic examination. Angiocardiography should be done only as a last resort, with knowledge of the potential dangers of this procedure in an infant. Passage of the contrast media into the common ventricle may be observed in the anteroposterior position.

Lesions considered in the differential diagnosis are atrial septal defect and ventricular septal defect including an Eisenmenger complex. The X-ray appearance of a single ventricle in the left anterior oblique position should distinguish these lesions.

A pulmonary tuck operation[24] is helpful as a stop-gap procedure. A ventricular septum was created in 1 child,[25] who, however, died suddenly 4 months later.

### COMPLETE ANOMALOUS PULMONARY VENOUS RETURN

In this anomaly all of the blood from the pulmonary veins drains either directly or indirectly into the right auricle. Most frequently the anomalous pulmonary venous return is via a persistent left superior vena cava. Less commonly the pulmonary veins empty directly into the coronary sinus, right auricle, superior or inferior vena cava, the portal vein, or the ductus venosus. The communication between the right and left sides of the heart is through the foramen ovale which is kept open by the increased pressure in the right auricle.

There is early onset of respiratory and feeding difficulties. Cyanosis is usually minimal and may become evident only with crying or on exertion. It is of the type that accompanies a decreased cardiac output. Knee-chesting is occasionally a symptom of the anoxemia. The heart enlarges rapidly after birth, and cardiac failure often appears early.

On physical examination the pulses are found to be diminished and the second heart sound accentuated. A systolic murmur of moderate intensity and occasionally a continuous murmur may be present, which is best heard between the second and fourth interspaces near the sternum.[26] The respiratory rate is markedly increased, and the blood pressure is low or normal.

The electrocardiogram shows right ventricular preponderance; although the right auricle is enlarged, this is usually not reflected in the tracing. The presence of a Q wave in the right precordial leads is frequently observed.[26] The X-ray or fluoroscopic examination shows marked right auricular enlargement and enlargement of the superior vena cava, depending on the several anatomic variations of the anomalous pulmonary venous return.[27] There is congestion of the lung fields. A typical supracardiac shadow forming a figure of eight with the rest of the heart is a distinct characteristic.[28] However, this is usually not evident during the first few months of life. Specific diagnostic procedures are not necessary, but if cardiac catheterization is performed, there is a high oxygen saturation of the blood in the right auricle approximating that of a systemic artery.

This lesion may be confused with aortic atresia. In the latter lesion the congestion of the lung fields is not as striking; when failure is present it may be difficult to decide about this point, but failure in aortic atresia is predominately of the right-sided variety. An Eisenmenger complex can be differentiated by the fullness of the pulses. A single auricle does not usually produce difficulties in early infancy so great that surgery has to be considered.

The operation indicated is an anastomosis of the common pulmonary vessel to the left auricle with partial occlusion of the common vessel.[29]

## ATRIOVENTRICULARIS COMMUNIS

In this anomaly there is a single atrioventricular valve which is common to both sides of the heart. There is also an interatrial defect above the common valve with free communication of all four chambers of the heart.

An uncomplicated atrioventricularis communis is one of the most readily diagnosed of all malformations. The history is one of early feeding and respiratory difficulties and early onset of congestive failure of the left-sided variety. There may be retardation in development.

Physical examination reveals a child with minimal cyanosis which may be slightly increased when the infant cries. The respiratory rate is increased and rales may be heard in the chest. The pulses are sometimes diminished and the second heart sound accentuated. A systolic murmur is usually present in the third or fourth left intercostal space. The characteristic murmur of mitral insufficiency is usually not heard in infancy; when present it is indistinguishable from the murmur of mitral insufficiency in rheumatic heart disease, although a systolic thrill may be noted. The blood pressure is low or normal.

The electrocardiogram usually shows left axis deviation and right ventricular preponderance with some prolongation of the P-R interval.[30, 31] X-ray films show a narrowing of the shadow of the great vessels due to a hypoplastic aorta and a large pulmonary artery.[32] There is generalized cardiac enlargement, and the lung fields are congested. Increase in pulmonary artery pressure may be demonstrated by cardiac catheterization, but special procedures are not necessary for the diagnosis of this malformation.

Lesions which may be considered in the diagnosis are single ventricle and auricular septal defect. However, these conditions do not present the characteristic electrocardiographic features of an atrioventricularis communis.

The upper margin of this defect should be closed with open heart surgery.[32] No attempt should be made to close the lower posterior margin under the common valve since this may interfere with the conduction system. An obvious cleft in the anterior cusp of the mitral valve should be repaired.

## TRUNCUS ARTERIOSUS WITH ABSENCE OF THE PULMONARY ARTERIES

In this malformation the truncus, which overrides the ventricular septum, arises from both ventricles. The pulmonary arteries are absent, and the circulation to the lungs is by way of the bronchial arteries. An atrial septal defect is commonly present.

There is a history of early onset of respiratory difficulties. Cyanosis is intense from birth, since the only blood supply to the lungs is through the bronchial arteries. It is possible for one of these to be abnormally large, producing congestion of that portion of the lung supplied by it, while the balance of the lungs receives a poor blood supply. Cerebral anoxemia may be present and spells early in life are not uncommon. Right-sided cardiac failure occurs later.

Physical examination reveals cyanosis which becomes intensified by crying; the pulses are full, and the second heart sound is pure, full, clear and sharp; a systolic murmur is usually present, and in addition a continuous murmur may exist, produced by the collateral bronchial arteries. This murmur differs from a ductus murmur in its lack of a crescendo-decrescendo quality. This is one of the few malformations in which cardiac enlargement can be present at birth. The blood pressure is normal.

The electrocardiogram shows right ventricular preponderance. Roentgenologic examination shows a characteristic contour with widening of the vascular shadow at the base which makes a sharp angle with the body of the heart due to the absence of the pulmonary artery. This sharp angle is usually most pronounced in the left anterior oblique position, although it may be very prominent in the right anterior oblique position.[23] Cardiac catheterization and angiocardiographic studies are not necessary in establishing the diagnosis.

It is of crucial importance to differentiate this lesion from extreme tetralogy of Fallot with atresia of the main pulmonary artery. In this lesion there is usually no murmur, the great vessel shadow at the base is not as wide as in a truncus arteriosus, and the right and left pulmonary arteries are present for operation purposes. Transposition may be differentiated by its characteristic X-ray appearance.

In the lesion under discussion a pleurectomy has given enough increase in the blood supply to the lungs for a good functional result in 1 case and would appear to be the indicated procedure at the present time.[33]

## ENDOCARDIAL FIBROELASTOSIS

Endocardial fibroelastosis unassociated with other cardiac defects is characterized by a thickening of the endocardium which consists of fibrous and elastic tissue. This occurs chiefly in the left ventricle; however, all chambers may be affected. Nonspecific symptoms, such as failure to gain weight, cough, and respiratory difficulties, occur during the first 6 months of life. There may be repeated attacks of labored breathing and tachycardia with vomiting or abdominal pain.[34] Gray cyanosis may be present. Sudden onset of congestive failure with progressive cardiac enlargement is characteristic. The clinical course is either acute with rapid deterioration and death, or there may be repeated exacerbations.[35]

On physical examination there is found no cyanosis or only a minimal grayish tinge due to diminished cardiac output. The pulses are normal or decreased, and there is a tachycardia. The blood pressure is normal, and congestive failure is of the left-sided variety. There may be no murmur or only a faint systolic murmur.

The electrocardiogram usually shows left ventricular preponderance and inversion of the $T_{4-6}$ waves. Fluoroscopic and X-ray examinations show generalized cardiac enlargement particularly involving the left ventricle. Cardiac catheterization may be helpful in excluding the presence of a shunt.

A period of observation may be necessary to differentiate these cases from primary myocarditis, since both may manifest themselves with the sudden onset of cardiac failure.[36] An anomalous origin of the left coronary artery from the pulmonary artery may be distinguished by the characteristic anginal attacks in the latter. The loud murmur of aortic stenosis will differentiate this malformation from endocardial fibroelastosis.

One of the procedures for vascularization of the left ventricle, as pointed out by Paul and Robbins,[37] is indicated in these cases. Because of the possibility of constrictive pericarditis following the installation of talc into the pericardium, a procedure anastomosing the lung to the heart seems preferable.[38]

### Anomalous Origin of the Left Coronary Artery from the Pulmonary Artery

In this condition the left coronary artery arises from the base of the pulmonary artery, and the right coronary artery takes its origin normally from the aorta. The poor oxygenation of the coronary arterial blood causes severe ischemia of the left ventricle which becomes firm and fibrous with hypertrophy, dilatation and myocardial degeneration. There is always a secondary type of endocardial fibroelastosis; the apical area of the heart may become thin, and aneurysmal dilatation frequently occurs.

The symptoms usually appear within the first 2 months of life and are similar to those of endocardial fibroelastosis with the exception of the history of the characteristic spells of coronary insufficiency.[39] These attacks, which resemble angina in the adult, are characterized by the sudden onset of acute pain. The infant cries out, pulls up his legs, becomes ashen, has rapid shallow respirations, and develops a profuse perspiration.

Left ventricular preponderance with low voltage and inversion of the T waves is seen in the electrocardiogram. Occasionally a pattern resembling anterior myocardial infarction is seen. An X-ray examination reveals hypertrophy of the left ventricle.

In congenital aortic and subaortic stenosis similar spells may occur, but these lesions would not ordinarily be confused with anomalous origin of the left coronary artery from the pulmonary artery.

The same operation to increase vascularization of the left ventricle is indicated as for endocardial fibroelastosis.[37, 38] A switch-over procedure is not physiologically sound because of the secondary endocardial fibroelastosis.

### Extreme Tetralogy of Fallot

In this form of tetralogy of Fallot there is extreme stenosis or atresia of the pulmonary artery. There may also be a marked degree of dextroposition of the aorta which overrides the defect in the ventricular septum. The circulation to the lungs is extremely poor unless the ductus is patent.

The classical form of tetralogy of Fallot does not cause difficulties in early infancy unless the baby is anemic; under these circumstances the child may have frequent attacks of cerebral anoxemia and may die in the course of one of them. Such babies may have no visible cyanosis, but the presence of a moderately loud harsh murmur and diminished blood supply to the lungs on fluoroscopy indicate the presence of a congenital malformation of the heart.

When the aorta is markedly dextroposed or the stenosis extreme, the infant may have severe episodes of cerebral anoxemia. The cyanosis, although only moderate at birth, gradually deepens, and the respiratory rate increases. There is a history of difficulty in feeding and gradual onset of congestive failure.

Physical examination reveals a dyspneic, cyanotic infant. Clubbing of the fingers and toes usually becomes evident by 6 months of age. Although the pulses are normal, the pressures may be difficult to obtain. The second heart sound at the base is normal or somewhat diminished in intensity. If atresia of the pulmonary artery is present it may be somewhat increased and strikingly pure. There is no murmur of significance when there is pulmonary atresia and none may be present if stenosis is extreme, that is, of pin-point size. The blood pressure is low or normal, and congestive failure is right-sided.

There is evidence of both right ventricular and right auricular enlargement on the electrocardiogram. Fluoroscopic examination reveals a contour which is rather characteristic if pulmonary atresia is present, resembling that of a truncus arteriosus. With marked stenosis, the apex may be tipped-up with a concavity in the region of the pulmonary segment. In the left anterior oblique position there is enlargement of the right ventricle with a clear pulmonary window. The pulmonary vascular markings are decreased. In some cases no definite branches of the pulmonary artery can be identified, but rather a reticular appearance is produced in the hilar and basal areas.[5] Cardiac catheterization and angiocardiography are not necessary to make a diagnosis and should not be done.

It is important to differentiate extreme tetralogy of Fallot from transposition of the great vessels with pulmonic stenosis, since in the former an anastomosis should be performed and in the latter an auricular septal defect should be created in addition to an anastomosis. The degree of cyanosis, the voltage of the electrocardiogram, and the size of the heart are of assistance in the diagnosis, but of most help is the presence or absence of a murmur. In extreme tetralogy of Fallot with pulmonary atresia no murmur of significance is heard, while in transposition with pulmonic stenosis a definite murmur is present.

A Blalock-Taussig anastomosis[40] or a Potts' procedure[41] should be performed. The latter is the operation of choice in an infant, because the subclavian artery is too small to allow performance of a satisfactory anastomosis which will remain open.[42] The completed anastomotic opening should be no more than 4 mm. in diameter. However, every effort should be made to carry a small infant along until he is old enough for a Blalock-Taussig anastomosis.

### Aortic and Subaortic Stenosis

In aortic stenosis the valve leaflets are fused, while in subaortic stenosis there is a muscular band or a membrane of fibrous tissue which lies immediately beneath the aortic valve.

The infant usually presents no difficulties in the first weeks of life and unless the stenosis is extreme may have no symptoms until childhood. There is no cyanosis. Due to coronary insufficiency, spells sometimes occur. There is no retardation in growth and development. Cardiac enlargement may be present at birth, and left-sided congestive failure can occur.

On physical examination there is found no cyanosis, the second heart sound is diminished in intensity, and the pulses are poor, with reduced systolic and pulse pressures. I have not encountered aortic stenosis at any age without a well-defined murmur. It is loud, harsh, and systolic, has a maximum intensity over the aortic area, and is transmitted to the large vessels of the neck.[43] A thrill is usually palpable over the aortic area.

The electrocardiogram shows evidence of left ventricular enlargement, usually with inversion of the T waves in lead I and in the precordial leads over the left ventricle. Roentgenologic and fluoroscopic examinations confirm the presence of left ventricular enlargement. Left heart catheterization is usually not necessary to establish the diagnosis, nor is this procedure ordinarily performed on a young child.

In early infancy aortic and subaortic stenosis may be confused with aortic atresia, which is characterized by similar physical findings but with marked right ventricular enlargement. The reason for this is that in fetal life aortic stenosis produces right ventricular enlargement, the blood by-passing the left ventricle through the ductus arteriosus. With the closure of the ductus the left ventricle enlarges, the enlargement of this chamber rather quickly replacing the enlargement of the right ventricle. If right ventricular preponderance persists in the presence of aortic stenosis, an associated congenital mitral stenosis or hypoplasia should be suspected.

An infant in failure with marked inversion of the T waves, and especially if there are fainting spells, should have an operation with a direct approach to the aortic valve.[44]

## Ventricular Septal Defect

A ventricular septal defect usually occurs in the membranous septum beneath the aortic and tricuspid valves communicating with the inflow tract of the right ventricle. Rarely is it in the muscular septum.[45, 46]

As in most lesions producing a shunt in infancy the child may have no difficulties. However, the severity of this lesion may be of such a degree as to cause heart failure and death in early infancy.[47] Fleeting episodes of cyanosis may occur, and a hoarse or "inaudible" cry may be present. Feeding difficulties, failure to gain weight, and respiratory distress are frequently followed by congestive failure, and pulmonary congestion may occur early.

Physical examination reveals a child with normal pulses and pressures and a somewhat increased second heart sound. A murmur is usually but not invariably present and is never as loud as the type produced by aortic or pulmonary stenosis. It is systolic in time and best heard along the left sternal border and may be accompanied by a thrill. There is often a precordial bulge and retraction of the lower ribs.

Evidence of left or combined ventricular hypertrophy is demonstrated on the electrocardiogram. Fluoroscopic and X-ray examinations reveal a heart in which all chambers are enlarged with evidence of a shunt in the lung fields. Cardiac catheterization may confirm the diagnosis. Angiocardiography is not helpful.

The diagnosis is rather difficult and is made essentially by exclusion. The lesions which have been discussed previously all have some rather characteristic feature, but this malformation does not. An additional complicating feature is that a ventricular septal defect, as a completely isolated lesion, is unusual; a small auricular septal defect or a patent ductus arteriosus is more often present.[48] It is most difficult to determine clinically whether a lesion of the Eisenmenger type is present, that is, whether there is appreciable overriding of the aorta. Some overriding of the aorta is present in all ventricular septal defects.

With conservative therapy these infants can usually be carried through the episode of failure which so many of them have in early life. If they do not respond, consideration may be given to open heart surgery.[49] This is hazardous in infants, and the decision must be weighed carefully in every case. In any lesion with excessive pulmonary blood flow, such as a large ventricular septal defect, single ventricle, truncus arteriosus and Eisenmenger complex, a pulmonary tuck operation is an excellent stop-gap procedure.[24]

## Conclusion

Life-saving heart surgery can be performed during infancy. It is therefore important to make a correct diagnosis of congenital cardiac lesions early in life. Since the advent of such devices for maintaining the circulation during open cardiotomy, such as extracorporeal cross circulation between a donor and a recipient[50, 51] and the mechanical pump oxygenator,[52, 53] most intracardiac defects are becoming amenable to surgical correction or alleviation. Problems in diagnosis during infancy should not be great if one is aware of the types of lesion which may give rise to symptoms during this period. It is essential to have a thorough knowledge of the clinical manifestations of congenital cardiac anomalies and to study each patient individually as a special diagnostic problem. In order to have a complete appraisal every possibility should be considered and discussed by a team including a competent pediatric cardiologist and a trained cardiac thoracic surgeon. No child should be subjected to operative treatment unless in the hands of a competent and experienced specialist in heart surgery. On the other hand, a child should not be deprived of the benefit of surgical intervention if such is indicated.

## SUMMARY

The procedures suggested in a complete cardiac evaluation for the diagnosis of congenital cardiac anomalies have been summarized.

Congenital malformations of the heart which become manifest during the neonatal period and infancy, and which are amenable to surgical correction, have been discussed. The history, physical findings, laboratory data, differential diagnosis, and surgical treatment of each lesion have been reviewed.

The malformations for which operative therapy are indicated include transposition of the great vessels, large patent ductus arteriosus, vascular ring, preductal coarctation, single ventricle with transposition, complete anomalous pulmonary venous return, atrioventricularis communis, truncus arteriosus with absence of the pulmonary arteries, endocardial fibroelastosis, anomalous origin of the left coronary artery from the pulmonary artery, extreme tetralogy of Fallot, aortic and subaortic stenosis, and ventricular septal defect.

It cannot be overemphasized that infants with congenital malformations of the heart should be given the benefit of a complete evaluation by a cardiac team. Surgery should not be attempted in the hands of inexperienced or poorly trained thoracic surgeons.

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# BRIEF PSYCHOTHERAPY WITH THORAZINE

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MORE THAN 1,500 papers on the use of Thorazine have been written. The majority of these specify that it is a helpful drug, particularly in facilitating psychotherapy with mental patients. From Winkelman's early paper[1] in 1954 through recent studies such as that of Tenenblatt and Spagno[2] all investigators have stated the necessity for psychotherapy in conjunction with the use of Thorazine. However, there is little mention of any therapy being given, except in a few papers such as that of Sainz,[3] who treated neurotics of the obsessive-compulsive type. An interesting paper by Cowden et al[4] compared the socialization of patients in group therapy receiving concurrent Thorazine treatment with those receiving the drug alone as a control.

It was thought that perhaps the understanding of the term psychotherapy as an intensive regimen of 5 hours per week per patient was a concept which kept many patients from receiving therapy because of the well known shortage of therapists.

I have found that a limited type of dynamically oriented psychotherapy made it possible to see 25 to 30 patients a week for periods of from 3 to 6 months. The results, from a study of 2 years' work with chronic female psychotic patients, would seem to make the report of the details of interest to many who would like to offer therapy but who are reluctant to undertake such a limited program.

In the group of patients studied there were 3 modalities of treatment. These were individual, group, and the use of drugs alone. All of the patients received Thorazine on a level of 900 mg. a day for a period of 8 weeks in the beginning to five and a half months. The average duration of hospital stay was over 6 years before the inception of treatment. Diagnostic categories reflected the usual chronic ward make-up with undifferentiated or catatonic schizophrenics representing two-thirds of the group and the paranoid group the other third. There were only 3 manic-depressive patients and 3 lobotomized patients in the total of 125 patients. Over two-thirds of the patients were perennial problems in hospital management because of recurrent hostile and aggressive behavior, and over one-half of the patients had been secluded a good part of the time for several years. Many of them had to be interviewed either in packs or with attendants present to prevent assaultive behavior when treatment was begun.

A carefully controlled program of treatment and observation on a treatment ward was set up to prevent or mitigate side-reactions and toxic complications. Nursing and attendant personnel were to observe and note all changes in patients on each shift.

Individual therapy was made available to two-thirds of the patients, and group therapy was offered to the rest. Individually the patients were seen 1 hour per week, and group therapy averaged 2 to 3 hours a week. Variations in time spent with individual patients occurred, since their need to talk or to be seen would fluctuate from week to week, and contact was maintained during disturbed periods.

This is certainly not adequate therapy as it is generally conceived according to analytic concepts, but it was undertaken because it was thought that all the patients possible had an equal right to the therapist's time.

The interviews were based on principles cited by Fromm-Reichmann,[5] Sullivan,[6] Alexander,[7] and others who have noted that certain changes are desirable in doing psychotherapy with psychotic patients:

1. The patient is kept within the therapist's range of vision and permitted to sit, stand, walk around, or lie on the floor.
2. The timing of interviews is flexible and varies in individual length and frequency according to the patient's needs; and they are terminable at her request. The therapist always sees a patient on any day she requests, even if for only a brief time.
3. Contact, even if nonverbal, is maintained during disturbed periods.
4. Free association per se was not used; but directed associated thinking with regard to a specific problem, its origin, timing, etc., is used if direct questioning or spontaneous statements leave the matter unclear.
5. Tacit expectation of adult behavior is stressed, with careful limits as to the task of investigation. An awareness of regressive behavior is kept in mind but not stressed unless commented on by the patients, and as a rule is reacted to as directly as possible in a nonverbal manner.

The initial interviews were concerned, for the most part, with an attempt to have the patients verbalize their physical reactions to the drug and with a careful statement of what we hoped to do together. This task was an investigation of unsatisfactory life experiences in the past and present. By a review of the patient's past, warped patterns of behavior were brought out with possible reasons for their appearance. Then a search in the daily life of the patient to see how these warped patterns were still operative; and finally, through contact with the therapist, these patterns were made accessible to awareness and verbalized, and an attempt was made to substitute more satisfactory modes of behavior which were also socially acceptable.

Individual patients varied greatly in their ability to relate meaningful data about their past history, especially that prior to the onset of illness. However, communication with most revealed varying amounts of data which could be used to give the patient a socially communicable "reason for his breakdown." A great many patients revealed quite clear-cut defense mechanisms, both in the past and in on-going interpersonal situations with other patients and/or the therapist. These were presented to the patient as subjects for investigation, and meaningful insight often resulted. One patient, for example, had been troubled with visual hallucinations like "a bird fluttering in the corner of my eye" in moments of tension. This recurred on one occasion after 6 weeks of therapy, and the patient reconstructed the episode as follows: "I had just 2 cigarettes left for after dinner, and June asked me for 1. I wanted to keep both of them, so I told her I was out. At this moment I saw the 'bird' and heard the voice say, 'Don't be afraid.' " When asked what thoughts had occurred to her about herself or the other patient, she said, "My first thought was I shouldn't be selfish. The second thought was, 'I'll bet she knew I had cigarettes anyway.' " With the recovery of these thoughts she verbalized quite clearly the relation between thoughts referable to self-depreciation by herself or others to the appearance of symptoms.

Working with these patients was fascinating because their symptoms altered in rapid progression like a recapitulation in reverse of the formation of personality defenses. The usual progression was from overt hostility or complete withdrawal through aggressive verbal behavior, suspicion, seductive testing, obsessive conformity, hypochondriacal preoccupation, and in favorable cases gradual growth of self-confidence, social adaptability and insight.

Four general classes of transference distortion were seen: (1) a mutual participant in hallucinatory experience, (2) a punishing father figure, (3) a permissive authority figure, and (4) a possible seductor. It was thought that transference reactions were minimized by the technic of interviewing cited above. This was felt particularly desirable in paranoid patients with their fear of closeness. Patients gained marked relief, after sufficient testing of the therapist, in feeling free to verbalize such fears as those relating to homosexual trends and aggression to others.

It was found helpful to use a statement similar to, "Such feelings are within the normal range of feelings." Because of the surprise often greeting such an obvious statement it became abundantly clear that most of these patients had never felt secure enough with anyone to share such feelings and therefore to document their essential humanity.

A subjunctive mode of expression often seemed to help patients with feelings toward their mothers, something like, "Some people might feel your mother had not been helpful to you and didn't want you to grow up. She did the best she could, but perhaps that wasn't best for you."

The results obtained from the therapy described seem to reflect its value. Approximately 40 per cent of the patients in individual therapy showed marked improvement, with the development of varying degrees of insight. These patients are either discharged and working or are on extended visits. Twenty per cent of the patients seen individually showed improvement in social adaptability, with remission of psychotic content and behavior. The remainder showed an improvement in ward behavior only but were no longer problems in hospital management.

Those patients receiving group therapy only showed one-third who improved to the level of improved social adaptability and remission of symptoms, and the remainder displayed improved ward behavior. Of this group only 6 patients displayed the minimal insight of, "I guess I had a nervous breakdown."

A third group which could be used as a control refused to enter into any communication therapy. This group of 12 patients consisted of 5 who were unable to speak English, 5 who refused all efforts to be contacted or go to group, and 2 who remained mute. One of these patients showed improved ward behavior only, which persisted. The other showed some temporary abatement of overactivity and hostility, but soon regressed to a pre-treatment level when treatment stopped.

From a psychologic point of view the predominant effect of Thorazine seems to be a marked reduction in the time needed to integrate a therapeutic relationship. Without Thorazine the "testing period" in analytic work with chronic schizophrenic patients seems to be at least a year. In most cases with Thorazine this is a month or less. There is yet no consensus in the literature for the exact physiologic locus of action of Thorazine, but its dominant effect seems to be on the hypothalamic and reticulospinal systems. Many remarks by patients and personal observations have led to the following working psychologic hypothesis. If anxiety is thought of as a mechanism designed to protect one from feeling an intolerable lowering of self-esteem, it distorts 2 classes of experience. The first type of distortion occurs with regard to our awareness of feelings within ourselves which we cannot tolerate, such as aggression to others. The second type of distorted experience is the recognition of disapproval from others. Thorazine seems to insulate the person, particularly against this second type of anticipated disapproval from others. A patient stated, "I don't know why, but it doesn't seem to matter too much what you might think if I tell how I feel. I know I shouldn't have these feelings about my mother, but I have."

The verbalization and acceptance of such hitherto uncommunicated feelings permitted an acceptance of a socially communicable rationalization for their past failures in living. With this explanation they again were ready to try more socially acceptable means of satisfaction and participate again in the human community. The human community, as has been noted by Overholser,[8] is also more willing to accept the patient. "The community is at last developing

(*Continued on page 282*)

# POST-MITRAL VALVULOTOMY STAPHYLOCOCCAL ENDOCARDITIS

## Report of a Case

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POST-VALVULOTOMY endocarditis is a rare occurrence. Dalton, Williams and Atkins[1] in a recent review of the literature have reported 9 cases of post-mitral valvulotomy endocarditis. Hufnagel, Harvey and Stapleton[2] consider it surprising that more infections of this nature do not occur, because a fertile field for bacterial growth exists at the operative site, infections could occur via postoperative infusions, and prophylactic postoperative antibiotics that are given routinely could mask smoldering infection. Staphylococcus organisms were isolated from 3 of the previously reported cases, 2 of which were antibiotic-resistant and the third of which responded to penicillin, sulfonamides and chloramphenicol. Two other cases of the 9 showed unmistakable clinical signs consistent with the disease, but blood cultures were consistently negative. The sixth patient showed positive cultures of *Pseudomonas aeruginosa* and died after a clinical course of 9 weeks. These authors added 3 fatal cases of their own from which *Staphylococcus aureus* was cultured from the blood. Unfortunately, postmortem confirmation of the disease could not be obtained in 1. The following case is the tenth reported of post-valvulotomy endocarditis, and the seventh having the staphylococcus as its offending organism.

### REPORT OF CASE

R. F., a 46-year-old white man, was first admitted to the Mt. Alto Veterans Administration Hospital, Washington, D. C., on March 22, 1954 with the chief complaint of fatigue and shortness of breath of 7 months' duration. He gave a history of an influenza-like disease at the age of 9 which caused him to lose 9 months from school. There were no joint manifestations or episodes of epistaxis noted during this episode. Subsequent to this, however, the patient did well. He was inducted into the Army in 1943. In early 1944 he collapsed while on a long hike but completed his basic training without further incident. Later in 1944, when the patient was examined for overseas duty, he was rejected and subsequently medically discharged for "heart disease." He was asymptomatic at this time. In 1946 he noted the onset of exertional dyspnea, and was treated with digitalis and a low-sodium diet. In 1947 he was hospitalized for 6 weeks because of intermittent anterior chest pain. His physical activity was reduced, but he continued to notice increasing dyspnea, minimal orthopnea, and parasthesias of the left arm. In July 1954 he was admitted to the Mt. Alto Veterans Administration Hospital for the first time because of the increasing severity of his symptoms.

Physical examination at this time showed positive findings limited to the cardiovascular system. There was a marked cardiomegaly, an irregular cardiac rhythm, a grade IV apical diastolic rumble with a corresponding palpable thrill, a loud opening snap, a grade II systolic murmur along the left sternal border, and a loud pulmonic second sound. Laboratory studies showed no anemia and a normal sedimentation rate on admission which later rose to 47 mm. per hour. The C-reactive protein was 2 plus, and Kunkle globulin and antistreptolysin titers were normal. A chest roentgenogram showed marked cardiomegaly, prominence of the pulmonary artery, and hilar congestion. Fluoroscopy revealed a calcified mitral valve and posterior displacement of the esophagus by the left auricle. An electrocardiogram showed auricular fibrillation.

During the patient's hospital course on the first admission he was maintained on 0.1 Gm. of digitalis daily. On admission his temperature was normal but rose to 102° F the following day. Five blood cultures were negative. He was given 600,000 units of procaine penicillin twice daily and salicylates. His temperature fell gradually to normal over a period of 2 weeks. At this time, however, he experienced an episode of left chest pain associated with several bouts of hemoptysis which regressed spontaneously. Quinidine failed to affect the auricular fibrillation. It was recommended that the patient should undergo a mitral valvulotomy but that this procedure should be delayed because of possible rheumatic activity. He was discharged on April 16, 1954 on salicylates and digitalis, with a diagnosis of rheumatic heart disease, mitral stenosis, mitral regurgitation and pulmonary valvular insufficiency, with an acute recurrence of his rheumatic fever.

The patient was readmitted to the hospital more than a year later on August 23, 1955. Since his discharge he had restricted his activity greatly. Despite this he had had occasional episodes of paroxysmal nocturnal dyspnea, hemoptysis on 2 occasions, and marked exertional dyspnea. He had been seen at monthly intervals by his own physician who had maintained him on a low-salt diet and digitalis. His physical examination showed further enlargement of the heart. The other cardiac findings were unchanged. The liver was enlarged to 2 cm. below the right costal margin and was tender to palpation. X-ray films and fluoroscopy showed further enlargement of the left auricle.

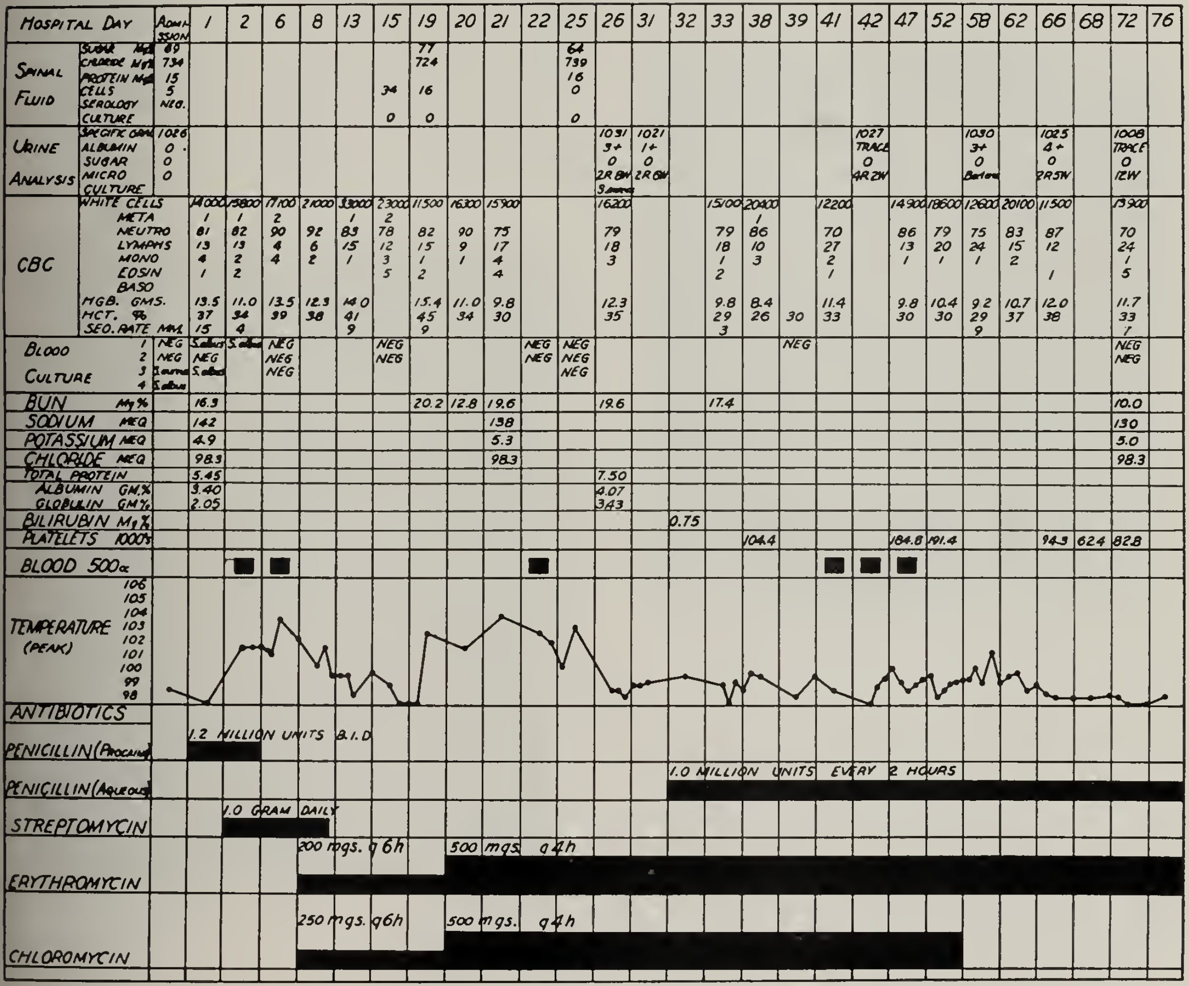
Laboratory studies revealed a Kunkle globulin of 7 units, negative C-reactive protein, and an antistreptolysin titer of 50 units. All other examinations were normal. It was thought that the patient was ready for surgery, but because of the unavailability of the cardiac surgeon at this time the procedure was delayed and the patient was discharged.

The patient was admitted for the third time on November 4, 1955. In the interim he had done well on a low-sodium diet and digitalis. Since all the studies were the same as on the previous admission, he was immediately prepared for surgery. During the induction of anesthesia the electrocardiogram revealed much cardiac irritability, and surgery was postponed. He subsequently improved, and after satisfactory induction of anesthesia, mitral valve commissurotomy was performed. A large adherent clot was noted in the auricle but was left undisturbed. The markedly calcified valve was easily fractured and the opening enlarged to the breadth of 2 fingers. Postoperatively the temperature rose to 102° F but gradually returned to normal in 5 days. The patient received 600,000 units of procaine penicillin and 0.5 Gm. of streptomycin daily for 6 days postoperatively. His physical examination before discharge showed a grade I diastolic murmur to the left of the sternum which suggested aortic insufficiency. His heart was still enlarged with the left border of dullness at the anterior axillary line. He was discharged 13 days postoperatively, afebrile and feeling well on a low-sodium diet and on maintenance digitalis. He was still fibrillating on discharge and had a slight amount of persistent thoracotomy pain, but his cardiorespiratory symptoms were markedly diminished.

The patient was admitted for the fourth time on December 8, 1955, with the chief complaint of chills and malaise of 4 days' duration. During this time he had experienced a fever which ranged from 100° to 101° F, orally. He had noted 3 or 4 chills daily for the 3 days prior to admission and associated with these was a sharp pain at the operative site, made worse by breathing, which was of the same nature as the one he had experienced postoperatively. On the day of admission he noted sudden transient paresthesias involving the face, the right arm, and the right side of the trunk and right leg. This had completely disappeared by the time of admission.

Physical examination revealed a sallow, chronically ill-appearing man with signs of marked recent weight loss. There were several petechiae on the upper aspect of the thorax and in the conjunctivae of the right eye. There were diminished breath sounds in the right lung base and a questionable friction rub at the left anterior axillary line. The heart rate was 78 per minute and irregular. There was a grade II systolic murmur at the apex. The tip of the spleen was felt on deep palpation. The neurologic examination was within normal limits. Additional petechiae were noted on the thorax over the next several days. An electrocardiogram showed auricular fibrillation. A roentgenogram of the thorax revealed some diminution of heart size. The lung fields were clear. Blood cultures taken on 2 successive days showed *Staphylococcus albus*, coagulase-negative, which was moderately sensitive to bacitracin and chloramphenicol and highly sensitive to erythromycin. There was marked resistance to all other antibiotics. He was given erythromycin, 200 mg. every 4 hours, and chloramphenicol, 250 mg. every 6 hours. His temperature subsided gradually after the initiation of therapy, but there was an occasional elevation to levels of 101° to 103° F.

The patient felt fairly well, however, until the seventeenth hospital day, when he could not be aroused. Focal seizures were observed, beginning in the right arm and leg. Examination demonstrated that the left corneal reflex was absent, and there were left facial paralysis, an absent gag reflex, and weakness of the left arm. The deep tendon reflexes were increased bilaterally, and there was a bilateral Hoffmann's sign. The opinion at this time was that the patient had had a shower of emboli involving the left cerebral cortex, with left-sided involvement of the brain stem. Subsequent to this episode the patient became more alert, although left-sided residua of the embolic episode remained. He complained of occasional left chest pain, and a roentgenogram showed blunting of the left costophrenic sinus, apparently by thickened pleura. Since he seemed to be doing well he was placed on physical therapy in bed and continued to improve gradually.



| | HOSPITAL DAY | ADMISSION | 1 | 2 | 6 | 8 | 13 | 15 | 19 | 20 | 21 | 22 | 25 | 26 | 31 | 32 | 33 | 38 | 39 | 41 | 42 | 47 | 52 | 58 | 62 | 66 | 68 | 72 | 76 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPINAL FLUID | SUGAR MG% | 89 | | | | | | | 77 | | | | 64 | | | | | | | | | | | | | | | | |
| | CHLORIDE MG% | 734 | | | | | | | 724 | | | | 739 | | | | | | | | | | | | | | | | |
| | PROTEIN MG% | 15 | | | | | | | | | | | 16 | | | | | | | | | | | | | | | | |
| | CELLS | 5 | | | | | | 34 | 16 | | | | 0 | | | | | | | | | | | | | | | | |
| | SEROLOGY | NEG. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | CULTURE | | | | | | | 0 | 0 | | | | 0 | | | | | | | | | | | | | | | | |
| URINE ANALYSIS | SPECIFIC GRAV. | 1026 | | | | | | | | | | | | 1031 | 1021 | | | | | | 1027 | | | 1030 | | 1025 | | 1008 | |
| | ALBUMIN | 0 | | | | | | | | | | | | 3+ | 1+ | | | | | | TRACE | | | 3+ | | 4+ | | TRACE | |
| | SUGAR | 0 | | | | | | | | | | | | 0 | 0 | | | | | | 0 | | | 0 | | 0 | | 0 | |
| | MICRO | 0 | | | | | | | | | | | | 2R 8W<br>[illegible] | 2R 6W | | | | | | 4R 2W | | | [illegible] | | 2R 5W | | 12W | |
| | CULTURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CBC | WHITE CELLS | | 14000 | 15800 | 17100 | 21000 | 33000 | 23000 | 11500 | 16300 | 15900 | | | 16200 | | | 15100 | 20400 | | 12200 | | 14900 | 18600 | 12600 | 20100 | 11500 | | 13900 | |
| | META | | 1 | 1 | 2 | | 1 | 2 | | | | | | | | | | 1 | | | | | | | | | | | |
| | NEUTRO | | 81 | 82 | 90 | 92 | 83 | 78 | 82 | 90 | 75 | | | 79 | | | 79 | 86 | | 70 | | 86 | 79 | 75 | 83 | 87 | | 70 | |
| | LYMPHS | | 13 | 13 | 4 | 6 | 15 | 12 | 15 | 9 | 17 | | | 18 | | | 18 | 10 | | 27 | | 13 | 20 | 24 | 15 | 12 | | 24 | |
| | MONO | | 4 | 2 | 4 | 2 | 1 | 3 | 1 | 1 | 4 | | | 3 | | | 1 | 3 | | 2 | | 1 | 1 | 1 | 2 | | | 1 | |
| | EOSIN | | 1 | 2 | | | | 5 | 2 | | 4 | | | | | | 2 | | | 1 | | | | | | 1 | | 5 | |
| | BASO | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | HGB. GMS. | | 13.5 | 11.0 | 13.5 | 12.3 | 14.0 | | 15.4 | 11.0 | 9.8 | | | 12.3 | | | 9.8 | 8.4 | | 11.4 | | 9.8 | 10.4 | 9.2 | 10.7 | 12.0 | | 11.7 | |
| | HCT. % | | 37 | 34 | 39 | 38 | 41 | | 45 | 34 | 30 | | | 35 | | | 29 | 26 | 30 | 33 | | 30 | 30 | 29 | 37 | 38 | | 33 | |
| | SED. RATE MM. | | 15 | 4 | | | 9 | | 9 | | | | | | | | 3 | | | | | | | 9 | | | | 7 | |
| BLOOD CULTURE | 1 | NEG | S. albus | S. albus | NEG | | | NEG | | | | NEG | NEG | | | | | | NEG | | | | | | | | | NEG | |
| | 2 | NEG | NEG | | NEG | | | NEG | | | | NEG | NEG | | | | | | | | | | | | | | | NEG | |
| | 3 | S. aureus | S. albus | | NEG | | | | | | | | NEG | | | | | | | | | | | | | | | | |
| | 4 | S. albus | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BUN | MG% | | 16.3 | | | | | | 20.2 | 12.8 | 19.6 | | | 19.6 | | | 17.4 | | | | | | | | | | | 10.0 | |
| SODIUM | MEQ | | 142 | | | | | | | | 138 | | | | | | | | | | | | | | | | | 130 | |
| POTASSIUM | MEQ | | 4.9 | | | | | | | | 5.3 | | | | | | | | | | | | | | | | | 5.0 | |
| CHLORIDE | MEQ | | 98.3 | | | | | | | | 98.3 | | | | | | | | | | | | | | | | | 98.3 | |
| TOTAL PROTEIN | | | 5.45 | | | | | | | | | | | 7.50 | | | | | | | | | | | | | | | |
| ALBUMIN | GM.% | | 3.40 | | | | | | | | | | | 4.07 | | | | | | | | | | | | | | | |
| GLOBULIN | GM.% | | 2.05 | | | | | | | | | | | 3.43 | | | | | | | | | | | | | | | |
| BILIRUBIN | MG% | | | | | | | | | | | | | | | 0.75 | | | | | | | | | | | | | |
| PLATELETS | 1000's | | | | | | | | | | | | | | | | | 104.4 | | | | 184.8 | 191.4 | | | 94.3 | 62.4 | 82.8 | |
| BLOOD 500cc | | | | ■ | ■ | | | | | | | ■ | | | | | | | | ■ | ■ | ■ | | | | | | | |

FIG. 1. Hospital course, laboratory results, and therapy.

Shortly after this he developed a bigeminal rhythm which was believed to be due to digitalis intoxication. Potassium chloride was given orally, and digitalis was withdrawn temporarily with improvement. On the thirty-second hospital day penicillin, 1,000,000 units every 2 hours, was begun, with concurrent erythromycin. The chloramphenicol was discontinued because there had been a marked drop in the patient's platelet count. He was continued on the above regimen until the night of the seventy-fourth hospital day, when he suddenly complained of a sharp anterior chest pain and expired rapidly. The course of the patient's illness is charted in figure 1.

Postmortem examination showed that the heart was grossly enlarged to the left, reaching to the anterior axillary line. There were numerous adhesions between the visceral and parietal pericardium. The heart weighed 560 grams. Both atria and ventricles were dilated with a boggy, soft myocardium. The mitral valve was patent and admitted 3 fingers; the edges were markedly calcified and the site of the fracture was evident. The valve itself showed approximately three-fourths of its surface to be occupied by a fungating reddish brown to reddish yellow vegetation (figure 2). There were several similar vegetations adherent to the wall of the atrium, and there was thickening and fibrosis with resultant shortening of the chordae tendineae. The aortic valve was calcified, and there was marked subendocardial fibrosis of the left atrium and of the left ventricle, especially adjacent to the aortic valve. The lumen of the left coronary artery was occluded several millimeters from its orifice by a small vegetation which was grossly consistent with the vegetation found on the mitral valve (figure 3). The rest of the coronary arteries showed a moderate amount of atherosclerosis. Cultures from the mitral valve showed *Staphylococcus albus*. Microscopic examination of sections of the mitral valve showed areas of marked fibrosis and hyalinization. Other areas showed fibroblastic proliferation, numerous vascular channels, and a marked infiltrate of polymorphonuclear leukocytes. The surface was covered by a dense exudate of fibrin and amorphous débris containing polymorphonuclear cells. Sections of the left auricle showed a very thickened, fibrotic, hyalinized endocardium. The outer surfaces contained a thick exudate of fibrin and amorphous material in which a few mononuclear cells and pigmented macrophages were scattered. The myocardium of the left auricle and ventricle showed edema with diffuse and focal areas of interstitial fibrosis. There were many focal areas of round cells and mononuclear cells.

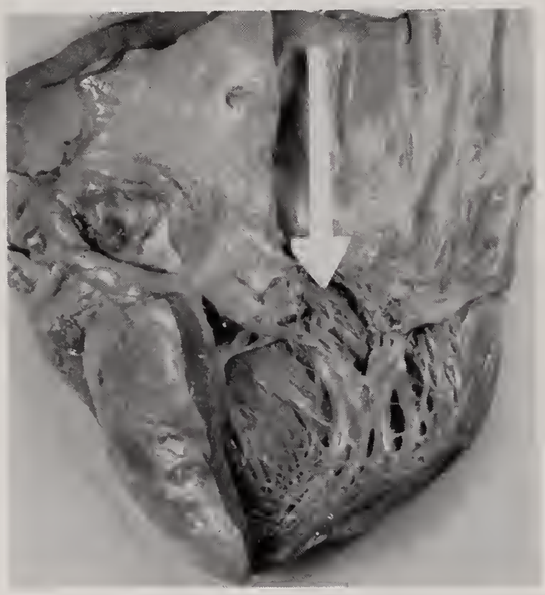


Fig. 2. Vegetations on mitral valve.

## Discussion

This case is of interest not only because of its rarity but also because of the manner of the patient's demise. The latter was precipitated by a sudden occlusion of the coronary artery by septic embolism from the infected valve leaflet. Roantree[3] described a similar terminal picture which was produced by occlusion of the mitral orifice itself by a large valvular vegetation.

Of note here also is the fact that the infecting organism was a *Staphylococcus albus*. *Staphylococcus aureus* has generally been the infecting organism in the other reported cases of this disease entity, as mentioned above. Dowling[4] has pointed out that the onset of a *Staphylococcus aureus* infection is more abrupt and acute than one due to *Staphylococcus albus*, although one can easily mimic the other clinically. In this case, due to the persistence of postoperative symptoms, the exact onset of the disease was not clearly defined.

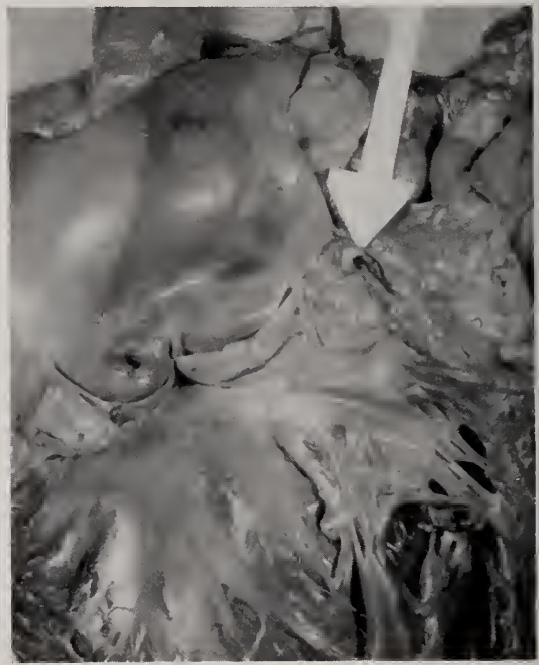


Fig. 3. Embolus in left coronary artery.

The prognosis for staphylococcal endocarditis does not appear to be related to the type of organism, preëxisting rheumatic fever, or the number of valves involved. Prior to the appearance of the sulfonamides no known cases of staphylococcal endocarditis survived. In all reported cases the mitral valve has been the only valve involved by the infecting organism with a few exceptions. One exception has been pointed out by Dowling,[4] namely, that in narcotic addicts, especially in those using intravenous administration, tricuspid involvement is common. These develop pulmonary emboli, and the chief complaint at the onset of the illness often is cough.

Because of its rarity and also because symptoms may be masked by post-thoracotomy symptoms and by the routine use of prophylactic antibiotics, some time may elapse before the clinician becomes aware of, or suspects, the presence of the disease. He may also confuse the condition with reactivation of rheumatic fever. In this instance, only the sudden appearance of hemiparesis, which was transient, followed by the discovery of petechiae and splenomegaly, which are incidentally a rarity in staphylococcal endocarditis, finally caused the diagnosis to be suspected. If it had not also been for prompt cultures which showed the presence of *Staphylococcus albus*, improper medication might have been instituted.

The phenomenon of post-valvulotomy embolization has been well described by Harken and Ellis[5] and others. In this case, however, the sudden paresthesias were considered to have come much too late to have been due to emboli secondary to the surgery per se.

## SUMMARY

A case of post-valvulotomy staphylococcal endocarditis has been reported. Nine other known cases have been reviewed briefly and the similarities of this entity to the usual post-thoracotomy sequelae noted. The clinician must be alert to the possible development of this complication of mitral valve surgery.

ACKNOWLEDGMENT: The authors wish to thank Dr. Edward D. Freis and Misses Ann Hight and Rosalie Gilroy for their aid in the editing and preparation of this paper.

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# MASSIVE SPLENOMEGALY IN SARCOIDOSIS

## Report of a Case

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SARCOIDOSIS frequently involves the spleen. Ricker and Clark,[1] in their review of 300 cases, including 22 autopsies, found the spleen involved in 77 per cent at necropsy. However, in only 8 per cent of these was splenic involvement manifested clinically. In a study of sarcoidosis by Longcope and Freiman[2] the spleen was clinically enlarged in 22 of 90 cases at the Johns Hopkins Hospital and in 22 of 52 cases at the Massachusetts General Hospital. Enlargement varied from slight to massive. At necropsy the spleen was involved in 10 of 26 cases. These authors reviewed the literature and found splenic involvement in 63 per cent of 92 necropsies in patients with sarcoidosis. The organs most commonly affected in their series were the lungs and lymph nodes; 86 per cent of each showed sarcoid, and the liver and spleen were next with 65 and 63 per cent respectively. The heart and skin were involved in 20 per cent, the kidney in 19 per cent, and bone marrow in 17 per cent. Friedman[3] in his review of 41 autopsies found the spleen to be the second most common site of involvement in sarcoidosis.

Occasionally splenomegaly may be the only clinical finding in sarcoidosis. Kay[4] reported 4 cases presenting as primary splenomegaly without clinical evidence of generalized sarcoidosis. Three of the 4 showed some evidence of hypersplenism with depression of 1 or more of the blood elements and hyperplastic bone marrow. The spleens were removed in all 4. Their weights were 710 Gm., 1,150 Gm., 1,250 Gm., and 4,800 Gm. The latter is the largest spleen due to sarcoid found on review of the literature.

Sarcoidosis should be considered in the differential diagnosis of enlarged spleens even without other manifestations of the disease. On many occasions the spleen has been removed with a preoperative diagnosis of such conditions as congestive splenomegaly, tuberculous splenomegaly, lymphoma, and idiopathic thrombocytopenic purpura. Kunkel and Yesner[5] reported a case of thrombocytopenic purpura associated with sarcoidosis in which the spleen weighed 210 Gm. Partenheimer and Meredith[6] reported a case of sarcoid apparently limited to the spleen, with anemia and leukopenia. The spleen was removed and the blood picture returned to normal. The spleen weighed 220 Gm. Cattell and Wilson[7] reported 2 cases of thrombocytopenic purpura with enlarged spleens seen at the Lahey Clinic. One case was a 10-year-old girl, the other a 19-year-old boy. The spleens were removed and found to contain the lesions of sarcoidosis. Following splenectomy the platelet counts returned to normal in each. The spleen weighed 135 Gm. in the 10-year-old girl and 1,460 Gm. in the 19-year-old boy. Occasionally sarcoidosis has been diagnosed by needle biopsy of the spleen.[8]

Cortisone has been used in attempts to shrink enlarged spleens due to sarcoidosis. These attempts have met with varying degrees of success. Kay and Royster[9] gave 1 patient 75 mg. of cortisone daily for a prolonged period. At operation the spleen was thought to be half the size prior to the use of cortisone. It weighed 1,090 Gm. Siltzbach[10] used cortisone in 2 patients with splenomegaly. He found no reduction in size on a dose of 100 to 150 mg. daily for about 60 days. It would seem that the stage of the sarcoid lesion would to a large extent determine the success or failure of cortisone in causing regression of the lesion. In the earlier stages the lesion consists of a low-grade interstitial granulomatous process occurring in multiple foci. The anti-inflammatory effects of cortisone at this stage might be beneficial in producing regression. In the later stages the lesion heals by sclerosis, and is gradually transformed into a relatively acellular hyaline mass.[2] At this stage cortisone is not likely to be beneficial.

It is unusual for sarcoidosis to involve the spleen to such a degree that splenectomy is indicated because of pressure symptoms alone. The following is a case report of a patient with generalized sarcoidosis and massive splenomegaly. Splenectomy was considered advisable because of the symptoms produced by the enlarged spleen.

## Report of Case

A 32-year-old Negro woman entered the Yater Clinic in September, 1956, complaining of enlargement of her abdomen and a feeling of fullness following meals. These symptoms had been present for 3 years. She stated that the enlargement of her abdomen made bending over difficult, and she felt the increasing abdominal pressure impaired her breathing.

In 1949 she had the onset of fatigue, fever and conjunctivitis. She had been hospitalized from May, 1949 to March, 1950. The liver and spleen were found to be enlarged, chest roentgenograms showed lung lesions, and there was a reversed A/G ratio. Fourteen gastric cultures and 2 bronchoscopies were done. One culture of all these was said to contain tubercle bacilli. She was given streptomycin for 3 months. This caused no improvement. On discharge from the hospital she was told that she had Boeck's sarcoid. One year later she developed skin lesions which have continued to appear over various areas of her body. Two skin biopsies were done. One was reported as nonspecific. She was given no report on the other. In 1953 the liver and spleen began to increase in size. She stated that her appetite was fair and that there had been no recent weight loss. She had been amenorrheic for 3 years. In the last few months there had been a low-grade fever, up to 101° F, occurring about 3 times a week.

On admission the temperature was 99.8° F, the pulse rate 116 per minute, and the blood pressure 110/80 mm. Hg. She appeared chronically ill. There were many discrete, elevated, pigmented lesions over the body, including the face. There were slightly enlarged, non-tender axillary and epitrochlear lymph nodes bilaterally. There was a decrease in the percussion sounds at both lung bases with diminished breath sounds at the right base. The heart was not enlarged. There was a grade I (Basis I-IV) pulmonic systolic murmur. The pulmonary second sound was split and accentuated grade I (Basis I-IV). Otherwise the heart examination was negative. The spleen was huge, extending into the pelvis and around to the left flank. The liver edge extended to 3 fingerbreadths below the right costal margin. There was no ascites. The remainder of the physical examination was not remarkable.

The hemoglobin was 10 Gm., the red blood cells numbered 3,460,000 per cu. mm. with a hematocrit of 34 per cent, the white blood cells numbered 5,000 with a normal differential, and the platelet count was 188,000. The sedimentation rate was 59 mm. per hour (Wintrobe). A catheterized urinalysis showed a 3-plus albuminuria with many fine and coarse granular casts. The blood Mazzini was negative. The total protein was 10.1 Gm. with 3.7 Gm. of albumin and 6.4 Gm. of globulin. The bromsulfalein test showed 9 per cent retention at 45 minutes. Serum calcium and phosphorus were normal. A chest roentgenogram revealed extensive infiltrative changes throughout both lungs, most marked toward the bases, with considerable hilar adenopathy and a nodular mass about 1 cm. in diameter in the second left interspace. Roentgenograms of the hands revealed no evidence of sarcoidosis. A roentgenogram of the right ankle showed a small area of rarefaction in the os calcis consistent with sarcoidosis. An electrocardiogram was normal, showing no evidence of right ventricular hypertrophy. A first strength PPD skin test was negative, but a second strength PPD test was positive, graded 2 plus. A biopsy of an epitrochlear lymph node revealed lesions considered by the pathologist to be typical of sarcoidosis. Smear and culture of the lymph node were negative for acid-fast bacilli.

In October, 1956 the patient was operated on. The spleen was removed and found to weigh 2,360 Gm. and measured 31 by 19 by 8 cm. Three small accessory spleens were removed, and a liver and left kidney biopsy were done. Microscopically the spleen and liver biopsy revealed a generalized granulomatous process consistent with sarcoidosis (figure 1). Special stains failed to reveal any etiologic agent. The left renal biopsy revealed mild tubular degeneration, and otherwise was normal.

Following surgery the patient did very well. She stated that her dyspnea was completely relieved and that she felt more comfortable than she had in 2 years. The postoperative course was uneventful, and the patient returned to work. She was last seen in January, 1957 because of mild swelling and pains involving the right ankle which was felt to be due to sarcoidosis. A roentgenogram of this joint showed a small area of rarefaction in the os calcis. Otherwise the patient felt well.

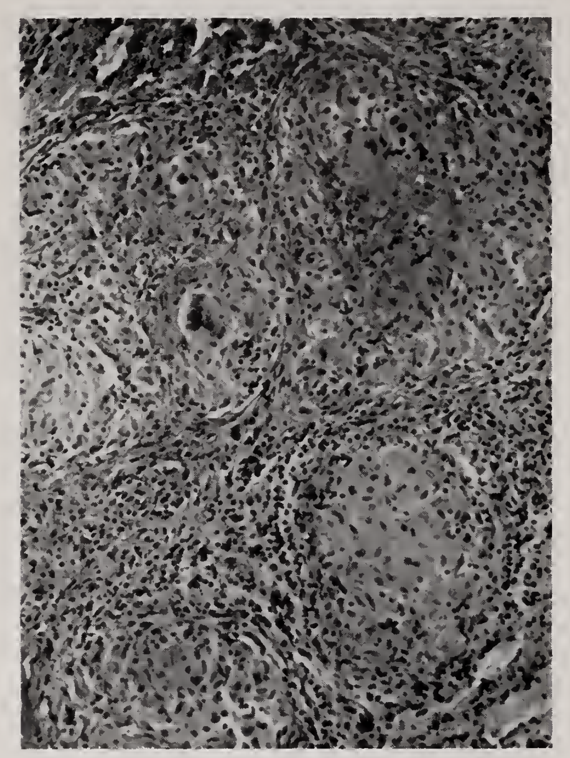

FIG. 1. Sarcoidosis of spleen.

## SUMMARY

A case is presented of generalized sarcoidosis with huge splenomegaly. The outstanding symptoms were due to increasing abdominal pressure. These symptoms were relieved by removal of a spleen weighing 2,360 Gm.

The literature has been reviewed, and the largest spleen found due to sarcoidosis weighed 4,800 Gm.

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# VISCERAL LARVA MIGRANS*

## A Cause of Severe Eosinophilia

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THE PURPOSE of this review is to bring attention to a relatively new disease in pediatrics known as visceral larva migrans.[1-6] This disease results from the ingestion of dirt infested with eggs of *Toxocara canis*, a parasitic round worm whose natural host is the dog. It should be of special interest to pediatricians in the differential diagnosis of causes of eosinophilia, since the infected patient manifests a great and chronic eosinophilia (table 1).

TABLE 1
*Causes of Eosinophilia*

| Disease | Degree of Eosinophilia |
|---|---|
| 1. Allergic disorders | Slight to moderate |
| Bronchial asthma | |
| Urticaria | |
| Hay fever | |
| Löffler's syndrome (probably parasitic) | |
| Topical eosinophilia (parasitic ?) | |
| 2. Skin diseases | Slight to moderate |
| Pemphigus | |
| Exfoliative dermatitis | |
| Dermatitis venenata | |
| 3. Certain infections: scarlet fever, chorea, erythema multiforme, syphilis and others | Slight to moderate |
| 4. Hodgkin's disease | Slight to moderate |
| Eosinophilic leukemia | |
| Chronic myelogenous leukemia | |
| 5. Familial eosinophilia | Slight to moderate |
| 6. Parasitic infections | Moderate to severe |
| Trichiniasis | |
| Schistosomiasis | |
| Filariasis | |
| Ancylostomiasis | |
| Strongyloidiasis | |
| Ascariasis | |
| Visceral larva migrans | |
| 7. Splenectomy | Slight to moderate |

The parasite, *Toxocara canis*, has a cosmopolitan distribution. It is especially seen in areas where the soil is sandy, warm and moist. It is one of the commonest parasites found in the soil. About 90 per cent of dogs under 2 years harbor the round worm, and it is the commonest large round worm of dogs.

The fertile eggs are passed in the dog's stools and contaminate the soil; after 3 weeks the eggs become embryonated and may be swallowed by man, especially children, who do not observe sanitary precautions. The larvae hatch, penetrate the intestinal wall, and migrate to various organs. The larvae usually remain in the liver, where after several months they become encapsulated and perish. It is of interest to note here that *T. canis*, unlike *Ascaris lumbricoides*, never reaches a mature form in man, since the natural host is the dog, and therefore stools of a suspected patient will be negative for ova and parasites when examined (figures 1 and 2).

Visceral larva migrans is related to cutaneous larva migrans or creeping eruption in that both are caused in the infective stage by larvae of nematode parasites specific for lower animals.

The liver is the organ most likely invaded, since it is the first barrier to the migrating larvae. Lesions have been found in the lungs, heart and brain also. Grossly one sees a large liver with many distinct, grayish-white areas measuring 2 to 7 mm., not confluent and slightly indurated. The lesions are seen to extend into the liver on cut surface.

Histologically the pattern of the liver is unchanged. There is marked cellular infiltration about the migrating larvae, especially around the portal spaces but less in the parenchyma.

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* From the Department of Pediatrics, Georgetown University Hospital, Washington, D. C.

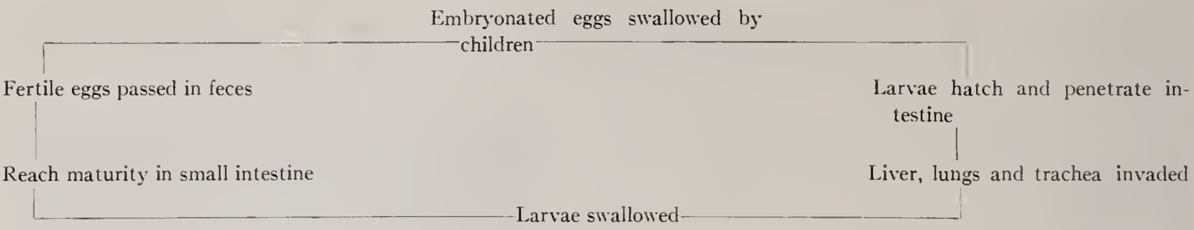
Embryonated eggs swallowed by children
Larvae hatch and penetrate intestine
Liver, lungs and trachea invaded
Larvae swallowed
Reach maturity in small intestine
Fertile eggs passed in feces

Fig. 1. Human infection with *Ascaris lumbricoides* (ascarid of man).

The lesions are granulomatous and contain numerous multinucleated giant cells of the foreign-body type. Eosinophilic polymorphonuclear leukocytes are present in large numbers (as the result of a hyperimmune response). Also seen are lymphocytes, plasma cells, and large mononuclear cells.

It is usually difficult to see the larvae, but when found in serial section they resemble the larvae of Ascaris except for their spear-shaped head.

The clinical observations of children manifesting this disease are protean and allied to diseases like Löffler's syndrome and tropical eosinophilia. Fever, leukocytosis, hyperglobulinemia and pulmonary changes are common. The pulmonary changes on X-ray examination are suggestive of patchy pneumonitis and Löffler's syndrome. Clinically the findings are akin to bronchitis and bronchopneumonia. The patient may exhibit malaise, pallor, anorexia and muscle aches and pains. Nausea and vomiting may occur. Jaundice may be present. Hepatosplenomegaly is common. On the trunk and extremities may be found an impetiginous, pruritic type of skin rash. Psychologically the child may be fretful, irritable, and unstable.

Blood examinations reveal a marked eosinophilia with white blood cell counts ranging from 15,000 to 80,000 per cu. mm. of blood with an eosinophilic percentage between 20 and 80. Eosinophilic myelocytes may be present on blood smears. Bone marrow examination reveals eosinophilic hyperplasia. In severe cases an iron deficiency anemia is seen.

The diagnosis of visceral larva migrans is a difficult one to make but should be strongly suspected in children with marked eosinophilia. The difficulty lies in several facts. The disease may coëxist with other parasitic diseases, especially *Ascaris lumbricoides* infestation. Many pathologic specimens show larvae that are usually disintegrated. Also, the pulmonary manifestations of this disease are indistinguishable from those of Löffler's syndrome and tropical eosinophilia.

Since no ova or parasites are found in the stools of infected children, this would be a strong point in suspecting the disease as opposed to other parasitic diseases (by exclusion).

The disease is highly probable in an infant or child, usually between the ages of 1½ to 3 years, who has a history of ingestion of dirt with a persistently high eosinophil count. When clinical symptoms warrant, a liver biopsy will make or strongly indicate the diagnosis.

Visceral larva migrans should certainly be suspected in cases of treated ascariasis with repeated high eosinophil counts. It should behoove the physician to consider this disease before making a diagnosis of "familial eosinophilia," a vague entity, or the very rare eosinophilic leukemia.

The prognosis in this disease is usually good, the disease often being diagnosed incidentally to another condition when routine laboratory work reveals eosinophilia. The parasites may remain active for as long as 12 to 18 months, with or without the patient manifesting symptoms in this period. Important to realize are the permanent changes which may take place in the brain if the parasites invade that organ.

Treatment to date has been empirical. Cortisone will cause cessation of symptoms and re-

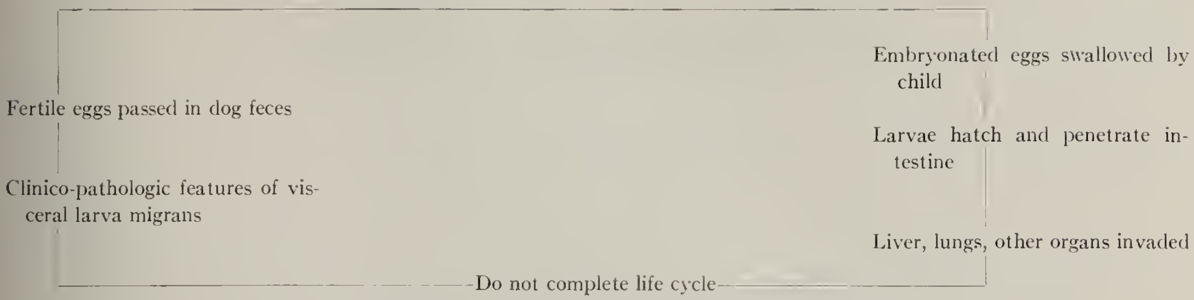
Embryonated eggs swallowed by child
Larvae hatch and penetrate intestine
Liver, lungs, other organs invaded
Do not complete life cycle
Fertile eggs passed in dog feces
Clinico-pathologic features of visceral larva migrans

FIG. 2. Human infection with *Toxocara canis* (ascarid of dogs).

duce the eosinophil counts, as in Löffler's syndrome. Hetrazan and antihistaminics have been tried without good results. Arsenicals have been advised because of good results in the treatment of tropical eosinophilia.

## SUMMARY

Visceral larva migrans should be strongly suspected in children in a differential diagnosis of marked eosinophilia.

The disease results from the ingestion of soil containing the larvae of *Toxocara canis*, a round worm specific for dogs, in the infective stage. Fecal examinations are not revealing, since these parasites do not complete their life cycle in man.

Definitive diagnosis can only be made by liver biopsy and identification of the larvae on serial sections.

Although usually benign and self-limiting, the disease may cause severe symptoms.

Treatment of the disease in man has been unsuccessful to date, but cortisone may be used empirically.

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# President's Page

## INFLATION AND THE MEDICAL SOCIETY

Rising costs have reached a point where many of us are deeply concerned. It poses an especially serious problem for those on fixed incomes or who operate on a non-profit basis. Our Medical Society is in the latter category, and it has occurred to me that it is only fair that our membership be made aware that, unless the present inflationary trend is reversed in the near future, the Society cannot continue to operate without additional income.

Those who attended the business meeting on March 6, 1957, will recall that the income and expense statement presented at that time showed an excess of income over expenses, before depreciation, of $5,703.98. Less depreciation, the amount was $1,022.79 and, following a transfer of $2,000 to the building fund, there was a decrease in net worth of $977.21.

The Society has been hit hardest by the necessity of competing with more affluent establishments for personnel and by the mounting cost of supplies, especially for printing, which is nearly prohibitive. An example of the latter is the 16.12 per cent increase in the cost of printing the MEDICAL ANNALS in the past two years—$26,705.99 in 1955 as against $31,026.09 in 1956. Another 11 per cent increase became effective with the January 1957 issue. Although the overall increase in cost of operation of the Society was not as great as that shown by the MEDICAL ANNALS, it, nevertheless, was an impressive 9.8½ per cent for 1956 over 1955.

The Society has a backlog of funds accumulated over the past 25 years which made it possible to undertake the recently approved building program. Even if these funds had not been earmarked for this purpose, and were used for current expenses, the Society could not continue to operate for very long on a deficit basis. Somehow, the income of the Society will have to be increased to a point where it will be sufficient to pay operating expenses and provide a cushion for unanticipated expenditures. How this should be done is something else again and remains for the Society to determine.

In the course of my Presidency, I have been impressed by the extent and variety of the Society's services to its members and the care with which the Society's funds have been expended. The Society could ill afford to allow anything to adversely affect the organization's forward-looking program and its financial stability.

Ralph M. Caulk

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# Editorials

## TIME FOR A CHANGE

Teaching is the art of imparting knowledge and sharing education.

The time has come for general practice to be taught to the students in our medical universities. The students are beginning to demand that the "iron curtain" be lifted so they may view that portion of medical education and its relation to the rest of medicine.

A few weeks ago a member of one of our local medical school alumni societies, a specialist, called upon me and stated that many medical students and other members of the society had asked that something be done about the lack of information and education regarding general practice at the universities. This specialist physician was quite surprised, as this was news to him. But this is not news to me or to other members of the American Academy of General Practice. For a number of years students in medical schools throughout the country have been asking us about the advisability of going into general practice. We likewise have endeavored to have the universities appoint general physicians to their teaching staffs to teach general practice to the students and interns.

A few days ago while in the process of delivering a baby in one of the local hospitals with the aid of the intern on service, I stopped momentarily during the repair of the episiotomy. I looked

*Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.*

up at the intern and asked him if he were going into general practice when he finished his internship. With an incredulous look upon his face he quickly replied, "Of course not." I asked him, "Why not?" He said that all through medical school it was so impressed upon the students that "general practice was the lowest ebb of the medical profession that indeed no one with good sense goes into general practice." "Furthermore," he continued, "one top professor claims the role of the general practitioner will be completely supplanted by the internist within the next few years." This same intern stated that all through his student years every class in his medical school had been told the same thing. Never had they had the opportunity to discuss general practice with the general practitioners in their entire four years of medical school or during their intern year.

A patient of mine is the wife of a medical student who is president of his class in one of our local schools. He is also an honor student. We were discussing what type of practice he planned to do when he completed his training. She told me he was going to be a general practitioner and that he was taking a veritable beating from a few fellow students and also from some of his professors since he had made what they considered a poor choice for his life's work in medicine.

I believe that our local universities as well as most medical schools throughout the country, with the exception of a handful of Midwestern and Southern schools, such as the University of Mississippi, University of Tennessee, etc., are 10 to 15 years delinquent for not having incorporated general practice education as an integral part of their curriculum to make their students more well-rounded physicians, practicing the type of medicine for which they are most fitted, whether it be general practice or a specialty. It is conceivable in the minds of forward-thinking physicians that almost all medical students after graduation should be subject to a well-rounded rotating internship associated with general practitioners in their hospitals, following this with 1 or 2 years of a general practice residency, or 1 or 2 years of general practice in association with an active general physician. In many instances the intern is ready to "jump" into a specialty which is usually not of his own selection but rather a selection by professional direction. This gives rise to misfit specialists who are frustrated in their "trade." We general physicians at times have to talk with these misfit and frustrated specialists. Some I know would go into other fields of medicine, maybe even general practice, if they could extradite themselves financially from their specialty. But, of course, they would also need proper training to do all-round good general practice.

Osler, Albert Schweitzer, Severinghaus, and other physicians with a well-rounded general education tell us that the wider and freer a man's education the better physician he is likely to be. General practice, then, should not be excluded from the medical school curriculum since general practice aids in widening the education of the student. Also, all of us in general practice have repeatedly seen the misunderstanding between some specialists and patients due to the specialists' inability to adequately and professionally say what they mean in simple language. This is the fault of the teaching program of the medical schools. Here, again, the general physician could come to the rescue. The general physician by experience is educated in all phases of the patient's life, his environment, his work, his home, and his family. We general physicians through this experience, probably more than through training, have learned the importance of social and environmental factors in the cause, diagnosis, and treatment of our patients' illnesses. We may save many years of trial and error on the part of recent graduates and interns if the medical schools and those physicians who teach will begin now to afford the student and intern the opportunity for closer contact with the general physician. It is also unfortunate that there is not a closer association between the staff physicians and the general physicians in the vast majority of the teaching hospitals.

We general physicians, experienced in the attitudes and illnesses of our patients as persons, might very well contribute to the education of the professors as well as the students. This lack of association is not of the general physicians' doing. Improved social and economic conditions these past 25 years or less have changed the "horse-and-buggy" doctor to an up-to-date, scientifically trained general physician with the latest diagnostic equipment and with well-trained aides. This change has not lessened our warm-hearted approach to our patients, but rather our training has enabled us to practice better medicine with a minimum of disability and cost to the patients. This is good. Unfortunately, the "ivory-towered medicine" practiced by most teaching institutions has changed very little and not one iota in respect to the association of the general physician within the universities. It is difficult to impress these teaching faculties that the curricula for students in medical schools must be changed with the progress of the times. It is time for that change now.

It is that experience learned by many years of practice, by visiting the homes and environs of his patients, that the able general physician can contribute to the students and interns. It is the wisdom of the art of medical practice. If some of this wisdom should rub off on the rest of the faculty I am certain no harm would be done. Now is the time to lift the "iron curtain" and allow the students and the interns to view this important portion of medical education and training that has been absent for almost a quarter of a century—the role of the general physician.

If the medical schools and the teaching hospitals cannot visualize the importance of a section on general practice integrated with the department of medicine, then perhaps they should listen to the questioning voices of the medical students and the interns who have repeatedly asked that the general physicians set up some type of educational program in which they may learn about general practice from the general physicians. This will enable them to evaluate this segment of medical practice. I might suggest that our Society's Section on General Practice, working with the D. C. Chapter of the American Academy of General Practice, could be instrumental in arranging this type of educational program. Distinguished general practitioners from the District of Columbia and surrounding states could be invited to present papers and answer whatever questions the medical students and interns might present.

In closing, may I call to mind the wisdom of Osler, "The family doctor, the private in our great army, the essential factor in the battle, should be carefully nurtured by the schools and carefully guarded by the public. Humanly speaking, with him are the issues of life and death, since upon him falls the grievous responsibility in those terrible emergencies which bring darkness and despair to so many households."

I. P. F.

## PLANNING FOR THE FUTURE

Fifty years ago only an optimist could visualize the growth of Washington, although it should have been obvious to him that the Capital of the United States would participate in the progression and prosperity of this country. It is evident that insufficient consideration was given to planning for the expanding demands of transportation, communication, water supply, and other municipal problems associated with an increasing population.

We are now confronted with this lack of vision. One needs only to visit our suburban areas and observe the harem-scarem layout of highways, bizarre architecture, inadequate school facilities, and other conspicuous deficiencies to be convinced that planning for the future has been sadly neglected. When a successful industrial corporation decides to build a plant which may employ thousands, it also plans to construct and develop an adjoining village or town, and to set aside plots for schools, hospitals, municipal headquarters, churches, fire houses, recreation centers, and other facilities which the prospective citizens have a right to expect. There are many such examples in this country today, nearly 200 in fact, of which Brook Hollow, Texas, is an outstanding example.

We will have in Washington, in the immediate future, an excellent example of the poor distribution of hospital facilities. Two of our largest and most modern institutions are located in the North and Northeastern sections of the city, while a University Hospital of nearly 400 beds and another proposed hospital of almost the same capacity will be operating on the western edge of the city, leaving a large part of the Northwest, Southwest, and Southeast, thickly populated areas, without sufficient facilities to replace the institutions which have moved. This applies particularly to emergency cases and outpatient service.

Some thought should be given to meet this situation. Assuming an accident occurred at 15th and Pennsylvania Avenue, resulting in the injury of several persons, how would prompt hospitalization be provided? Ambulances could probably be summoned from Casualty or D. C. General Hospital. Should the traffic be what it often is, the delay in moving the injured persons might make the difference between a rapid recovery and a prolonged convalescence, even a fatality. Transporting patients suffering from a fractured hip, a broken back, or severe hemorrhage by taxicab or police patrol wagon, unaccompanied by trained medical personnel, is unthinkable and should not be tolerated in this age. This is not a pleasant situation to contemplate, but it is staring us in the face.

When the Southwest section is rebuilt, the State Department addition is completed, and Foggy Bottom rejuvenation becomes a reality, there will be a large influx of employees and residents in an area poorly equipped to meet the demands for hospitalization. Many of the persons who will live or work in this area will need hospital beds, because they will be subjected to the usual diseases, sometimes catastrophic, and major and minor injuries.

Some progressive communities locate hospital substations where employment, traffic and pedestrian congestion is greatest in order to meet the demands of imperative medicine and traumatic surgery. These small institutions are equipped to receive and treat such patients temporarily, but they are removed to hospital centers or to the care of their physicians as soon as their condition permits.

The time arrived some time ago when planning for distribution of hospitalization should have been undertaken, but it would seem that everybody's business is nobody's business. In providing police station houses and fire department quarters, sites for such buildings are not selected because the real estate is inexpensive, or an outright gift, but they are located where they will meet the requirements of the people they serve. When the center of activity or the character of the area shifts, the buildings are abandoned and modern ones in a more serviceable location replace them. Such a plan has merit, but to erect an institution in a new spot without regard to furnishing substitute services in the abandoned area is not a functional design for a modern community.

C. S. W.

# THE PROBLEM OF THE CHRONIC ALCOHOLIC

The best thought of physicians, lawyers and social workers should be devoted to the prevention and cure of chronic alcoholism because it has caused much sorrow, misery, poverty, disgrace, ill health and insanity. Up to the present time the key has not been found to open the door to the solution of this problem, although it has been sought for a long time. The fermented grape was in use from before Biblical times, and subsequently rye and corn and other members of the vegetable kingdom have been used to produce alcohol.

When used in moderation after the day's work is done, it promotes appetite, conviviality and a sense of well-being. It is the safest sedative known today. Moderate use of alcohol is particularly beneficial to the aged and has prolonged many lives. The increase in longevity during the last 50 years, when workers must retire at 65, has produced many oldsters whose lives are unhappy because they are no longer needed by society. This unhappiness can be at least temporarily overcome by an alcoholic beverage about twice a day. It changes their frame of mind.

The consumption of alcohol will probably continue as long as life exists on this planet, and the average moderate drinker will continue his habit without harm to his health. There is no scientific basis for the claim that kidneys, liver, brain or other bodily organs are affected in a deleterious manner by the moderate consumption of alcohol. The "noble experiment" of prohibition in this country was a failure, because to deny the moderate drinker his beverage was like telling him he could not have ice cream or coffee or any other pleasurable and harmless indulgence to which he was accustomed. Furthermore, prohibition produced bootleggers and crime and disrespect for law generally, and that era also was responsible for more chronic alcoholism than had existed before. During that time, if one invited a friend to have a hospitable drink, he would remain until the bottle was empty because he was uncertain as to when he could obtain more good liquor. Today when good liquor is plentiful, he absorbs his 1 drink and is on his way.

It is interesting to note that a large percentage of the population of this country does not drink alcoholic beverages even moderately and, of those who do indulge, only about 5 per cent become chronic alcoholics. Five per cent amounts to quite an army. It is approximately two million people of our adult population. This number must be reduced—but how?

It is important to find out why one moderate drinker becomes a chronic one and why another who has consumed alcohol all his life does not. Many chronic alcoholics were psychopaths before they adopted the habit. On the other hand, many apparently normal persons who are users of beverage alcohol become pathologically addicted to its use. Why this is, is a problem for the psychiatrists to solve. The alcoholic can usually rationalize his behavior. A painful illness, business reverses, grief for the death of a near relative, or an unhappy domestic life are all used as alibis for continued drinking. The idea has been advanced that, if the chronic alcoholic were to be deprived of his drink before he is psychologically ready, he might become a drug addict, a criminal or a suicide. This idea is worthy of consideration.

The chronic alcoholic cannot be cured up to this time until he is ready to admit to himself that alcohol has him "licked" and that his life depends upon abstinence. When he has come to this realization his cure may be attributed to Alcoholics Anonymous, Christian Science, the clergy, or the doctor, but the real reason for the cure lies in his mental attitude toward alcohol. After he has resolved to leave it alone, he must realize that he must never touch even one drink again, that it is as harmful to him as sugar is to the diabetic. I have known alcoholics who felt

BABYLONIAN PHYSICIAN ON TRIAL

This is the second painting in the Parke, Davis & Company series depicting the history of medicine, published in the March edition of its *Therapeutic Notes*. In the full-color oil painting, captioned "The Code of Hammurabi," a Babylonian physician defends his professional practices against the complaints of a dissatisfied patient seeking invocation of the Code, which established physicians' fees for services and severe penalties for neglect of duty. This dramatic scene of 4,000 years ago was painted by artist ROBERT THOM, of Birmingham, Michigan, and edited by GEORGE A. BENDER, of Parke-Davis, originator of the series.

that a martini cocktail or a glass of wine was innocuous and that they could take them with impunity. I always advised them that alcohol is alcohol, regardless of the guise in which it appears, and that one drink of any kind of alcoholic beverage may again begin the habit which has been a curse to them heretofore.

A visit to the Police Court any day when the repeaters of drunkenness are returned to the work house will convince the observer of the futility of this procedure. A few weeks' hospitalization is no more effective.

I should like to see the Ford Foundation or some other philanthropic institution build a large hospital near Washington as an experiment which may prove fruitful, and, if it is that, other large cities could follow suit. Judges could be empowered to sentence chronic alcoholics, upon their second offense, to 2 years' incarceration in this hospital without parole, and provide further that the alcoholic must spend 2 weeks (following his discharge) every 3 months for another year confined in the hospital. Appropriate occupation should be supplied during hospitalization. The hospital should be staffed by psychiatrists who could study chronic alcoholism daily during that time. This would benefit the victim, the public pocketbook, and would add to the fund of accumulated knowledge. The alcoholic's family is not usually supported by him while he is free, so hospital incarceration would not impose undue hardship. The prospect of two years' incarceration could be an incentive to moderation.

We must continue to regard the alcoholic as a sick individual who deserves our sympathy and our utmost effort to find and remove the cause of his affliction. This goal cannot be achieved while the extreme "wets" and the extreme "drys" continue to battle with unscientific, prejudiced weapons. Doctors and hospitals should be encouraged to treat alcoholism with the same care and consideration which is extended to the pneumonia patients. When all is said, the chronic alcoholic remains a problem for the medical profession to try to solve.

JAMES A. GANNON, M.D.

# In and Out of Focus

BY THE OBSERVER

***Our Rehabilitation Program*** Although the matter has been discussed at business meetings, most members know very little about the Society's Rehabilitation Program. A very few are aware that this is the first project of its type conducted by a medical society under a Federal Government grant. The purposes of the program, as set forth in the Society's application for funds, were "to study existing Rehabilitation Programs and facilities of the Washington Metropolitan Area; to assess present and future needs; to work toward the development of an orderly, well-rounded rehabilitation program for the handicapped in the area."

It has been suggested that the program will never arouse any great enthusiasm because it lacks appeal. However, it seems to your Observer that this is refuted because of its very nature. What finer or, for that matter, heart-warming contribution can be made to the welfare of a community than the salvaging of human lives? It is this task to which the Society's Council on Rehabilitation is dedicated and to which it hopes to make a modest contribution.

The story of the Society's activities in this field to date is this: During his year as President of the Society, Dr. P. A. McLendon became interested in the District's rehabilitation program, which was then in a state of flux. It was his conviction that there was real opportunity for the medical profession to assume leadership in a field in which it was eminently qualified. Eventually he learned that Federal funds might be obtained for the purpose of making an inventory of the facilities in the District for rehabilitation and how they might best be integrated and improved.

With the approval of the Society's Executive Board, an application was made to the Office of Vocational Rehabilitation, Department of Health, Education and Welfare, for a grant to be used for these purposes. The funds were obtained and the Council on Rehabilitation came into being. Appointed to it were not only members of the District Medical Society but representatives of the neighboring medical societies.

Several months passed, following approval of the grant, during which the Council considered the best course to pursue. It was finally decided to employ Miss Josephine Albrecht, who had been Executive Secretary of the Health Section, United Community Services, as Project Director. Miss Albrecht, as subsequent developments proved, was a fortunate choice. For the past several months, she and a secretary have had temporary offices on the balcony of the Society's auditorium and will remain there until the Society's building program is completed.

Early in its existence, the Council adopted the following broad objectives:

"1. To demonstrate the role of the local medical society in total community rehabilitation planning; to provide a case history of the kind of thing which the medical profession can do by giving leadership and counsel to see that any planning with, or on behalf of, the handicapped will have the benefit of sound and advanced medical thinking.

"2. To take an inventory of rehabilitation programs and facilities in the Washington Metropolitan Area so as to gather insight into the existing programs, finances, and resources, any gaps in service, and/or duplications which may exist, and to prepare a report on findings, conclusions and recommendations pointing toward improved services to the handicapped.

"3. To foster broad scale community interest and support in rehabilitation of the handicapped.

"4. To promote understanding among physicians and allied personnel of the broadest concept of total rehabilitation and their respective roles.

"5. To develop some sort of a coördinating organization—a central service—which can serve as a clearing house of information, and which can focus the work of other community planning groups, and help to prevent in the total program of care for the handicapped the fractionization of services, facilities, and personnel in the area.

"6. To publish a directory of resources for the handicapped."

The first step undertaken by the Project Director was the development of an inclusive listing of tax-supported and voluntary health agencies and organizations concerned in any way with one or more aspects of rehabilitation of the physically, mentally and emotionally handicapped in the Washington Metropolitan Area. In the course of preparing the list, many contacts were made, which led to a meeting of all interested groups, and was held in the Medical Society's building on July 12, 1956.

More than 140 organizations, a number of which were represented at the above meeting, have been the object of detailed study by the Director. Since she assumed her duties, five working committees have been organized, each of which is made up of persons from "all related disciplines and interests," as well as from the geographical areas involved.

By March 31, 1957, members of four of the five committees had been appointed and briefed on their responsibilities. It is hoped that the initial phase of the Council's program can be completed by June 30, 1957; that is, that a complete inventory will have been made of all organizations related in any way to rehabilitation now active in the Metropolitan Area. The Council will then be ready to undertake "the formulation of conclusions and recommendations for an adequate, well-rounded, well-financed spectrum of community rehabilitation services."

Nearing the completion of its first year of operation, the Council is seeking a continuation grant from the Federal Government in the amount of $20,344.00 for the period, July 1, 1957 through June 30, 1958. On the basis of the Council's excellent beginning, it is hoped that the Government will see fit to underwrite this worthy project for another year.

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### *V. The Society's V. P.'s*

Chapter V. Section 4 of the Constitution and By-laws reads: "The Vice Presidents shall, in order of their rank, assume the duties of the President during his absence or inability to act."

For a number of years neither Vice President had any responsibilities other than to preside at occasional meetings or to substitute for the President during his absences. However, in 1944 an incident occurred which made the First Vice President's office of far greater importance than in previous years. Dr. James A. Greear, then President of the Society, entered the armed forces midway in his term. Dr. William M. Ballinger, then First Vice President, thereupon became Acting President for the remainder of the organization year. Despite the fact that he had not had an opportunity to familiarize himself with the organization's activities, Dr. Ballinger gave such a splendid account of himself that he subsequently became President of the Society in his own right.

This incident impressed the Executive Board with the importance of the First Vice President's having the background necessary should he be called upon to assume the duties of President. Succeeding Vice Presidents since 1945 have, therefore, been invited to attend all Board meetings. They receive all material sent voting members so that they have an opportunity to inform themselves. Although they have no vote, they are invited to participate in all discussions.

The Second Vice President's duties remain largely that of presiding at meetings during the Annual Scientific Assembly or substituting for the President or the First Vice President should that be necessary. It has been suggested that this officer be given responsibilities in addition to those prescribed by the Constitution and By-laws, but no definite steps in this direction have yet been taken.

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### *VI. Delegates to the AMA*

Chapter V. Section 7 of the Constitution and By-laws reads: "The Delegate or Delegates to the House of Delegates of the American Medical Association, or, if he be unable to serve, the Alternate or Alternates, shall attend the sessions of the House of Delegates of the American Medical Association as the accredited representative of this Society; and shall make report thereon at a subsequent business meeting of the Society. The Senior Delegate to the House of Delegates of the American Medical Association shall be a member of the Executive Board *ex officio*, with powers and duties incident thereto. Seniority of Delegates shall be determined by date of election or by the largest number of votes received if elected simultaneously."

Among the subjects dealt with by the Study Commission on the Reorganization of the Medical Society in its report at the business meeting on March 6, 1957, was the election procedure. One method or another, the Commission pointed out, had been tried over many years. Nominating committees had been appointed and, subsequently, abandoned. Political cliques, which at times controlled elections, had flourished and faded. At long last, the Society took action to make certain that not only would the best possible candidates for office be selected but that it would be done in a thoroughly democratic manner.

In 1939, when the present Constitution and By-laws was adopted, no provision was made for the appointment of a nominating committee, nominations being made from the floor. This method, it was soon discovered, had serious defects. In the first place, all interest in elections was focused on the President-elect. Immediately after his election to office, there was a general exodus of the members present. Obviously, they were unaware of the importance of the other offices, among them the delegate to the American Medical Association. If they had only known it, no position the Society has to offer is of greater importance to the organization and its members.

Despite the Society's disinterest, those who were elected delegates under the above conditions were unusually capable men. Your Observer has had the privilege of attending annual sessions of the House of Delegates with all of the Society's delegates since 1939. He is certain that no medical society could be served by more serious and capable representatives.

Until 1947 the Society was entitled to only one delegate. It acquired a second when the House of Delegates voted that state medical societies were entitled to additional delegates for each thousand Active members or fraction thereof. The Society's Active and Life membership was 1,101 at the time it was first entitled to an additional delegate; at the end of 1956, it was 1,492.

For those who are not too familiar with the organizational structure of the American Medical Association, the House is the deliberative body which establishes the Association's policies. Represented in the House are all the states, the District of Columbia and the territories of the United States. Responding to the 1956 roll call were 170 delegates.

The House is presided over by the Speaker or Vice Speaker, both elected annually. They are or become skilled parliamentarians and few bodies are conducted with more precision and efficiency than the House.

On the morning of the opening day of the three- to four-day meeting, following addresses by officers and the presentation of guests, and so on, resolutions of every nature pertaining to medicine are introduced. These are referred to Reference Committees, composed of members of the House, which, following the opening day, hold hearings for the purpose of providing their colleagues and others an opportunity to express their views on the various resolutions. Any member or officer of a county or state medical society is privileged to attend and make his views known.

Following the hearings, the Committees go into executive session and prepare their reports with recommendations.

Committee reports are brought to the floor of the House. More often than not the reports are accepted with little debate. On occasion, however, arguments become heated. As in all democratic bodies, the majority rules.

Obviously, the longer a delegate serves in the House the more effective he becomes. This is natural because he gains in prestige only as he broadens his acquaintance among House members and earns their respect. He also needs the seasoning acquired by serving on Reference Committees and by participating in discussions on the floor.

Dr. Raymond T. Holden is at present the Society's Senior Delegate, having been reëlected for a two-year term, effective January 1, 1957. During his two terms as delegate, he has not only demonstrated his abilities as a leader but has become favorably known to nearly all members of the House. He has been a member of several Reference Committees and, when the occasion demanded it, has addressed the House effectively. Dr. Victor R. Alfaro, the Junior Delegate, attended his first session of the House in Seattle last December. He has the ability and interest which are so important in the making of a good delegate. His election for a two-year term beginning January 1, 1958, will assure him an opportunity to demonstrate his qualities of leadership in the House.

Members of the Society should attend at least one session of the House. They will find it an unusually interesting and enlightening experience. They will also appreciate more than ever the importance of the office of delegate and discover the seriousness and effectiveness with which the delegates perform their duties.

Your Observer, then, would urge his readers who plan to attend the Annual Meeting of the American Medical Association in New York this June to pay at least one visit to the House. He can assure them that it will be time well spent.

***Plain Talk*** Organized labor's views on medical care have taken on increasing significance to Blue Shield officials because of the spectacular growth of health and welfare programs. As is well known, many union leaders are not too sympathetic to Blue Shield, being advocates of some form of compulsory health insurance. However, Blue Shield does have influential friends in the labor movement, one of them being John A. Tomayko, Director of Insurance, Pensions and Unemployment Benefits Department, United Steel Workers of America.

In an address at the annual meeting of Blue Cross and Blue Shield Plans, held in San Francisco late in March, 1957, Mr. Tomayko described himself as "a friend of the medical profession and Blue Shield." Nevertheless, he let it be known in some pretty plain talk that members of his union were not satisfied with the coverage now available.

In a mild beginning, Mr. Tomayko explained the position of his organization. "Why did we choose Blue Shield to provide surgical and medical benefits under our programs? We must face the fact that we were motivated by only one reason We believed that you were the vehicle through which the United Steelworkers of America could provide service benefits to its members. There was no other reason. I repeat, the only reason was that Blue Shield alone held out the possibility to us that through its official relations with physicians it could provide a means whereby the surgical and other costly medical bills could be paid in full through prepaid insurance within the framework of our present system of private practice of medicine."

It appears that Blue Shield's contract with the basic steel industry will continue until November 1, 1959, "without opportunity of improvement." At that time, Mr. Tomayko said parties to the contract must accept their joint responsibilities to make the program a success. His union's demands, he continued, were as follows:

"1. *Full service benefits.* When you deal with steelworkers you are not dealing with such vast ranges of income that some steelworkers could be considered 'poor' while others are 'rich.' In other words, a way must be found to provide full service benefits regardless of income. This can be done in one of two ways, either by eliminating the income limitation or by establishing the income limitation high enough to include all steelworkers at their present level of earnings. If income limitations are established on the basis of present earnings then a formula must be devised which will automatically increase the limitations as the steelworkers' earning power increases. Uneconomical premiums and out-of-line fee schedules are no better than plans that do not provide service benefits. Both are equally unrealistic in meeting the real problems of industrial workers, and neither approach will be supported by our Union.

"2. *Development of a program of complete health care security.* You have permitted the private insurance carriers to catch the public eye with its 'major medical schemes.' Our steelworkers rightfully expect a program that will give equal emphasis not only to the first dollar of medical care cost but also to the last. You must realize that our present programs leave the patient completely exposed to overcharges by the non-coöperative physician. Programs must be developed that encompass early diagnostic and preventive medical care, treatment of the chronically ill, hospital visits, home and office calls, dental, drug and appliance bills. We have received a timely warning from our members. Immediate steps must be taken by you to institute conferences between our Union and the medical profession to develop such a program far in advance of our opportunity to renegotiate these matters with the steel industry in 1959.

"3. *Efficient and economical use of the steelworkers' medical care dollar.* We must be realistic. Only a small portion of the dollar profit of the steel industry can be devoted to health care. Steelworkers still expect an increase in their pay envelope to provide them with improved standards of living.

"4. *Is Blue Shield a community organization?* The steelworkers believe that Blue Shield has lost sight of its original purpose and has deteriorated to a collection agency for the medical profession. An organization that really purports to be one which renders public service must have representation of the consuming public on its Board which is at least equal to the representation they grant the professional interests they serve.

"5. *Health care for the aged, the unemployed and the disabled.* The American public has developed and accepted a method of providing food, clothing and shelter for our ever increasing aged, disabled and unemployed citizens through our highly successful Social Security System. We are confident that your progressive organization will join with us in supporting legislation that will provide through this same Social Security System adequate medical care for this unfortunate group.

"Since these members of our Society have the highest utilization of health care services and the least ability to pay it is imperative that some type of governmental program be established to carry this burden and to prove to all the world that our democracy is able to care for all of its people."

Mr. Tomayko concluded his address with the following:

"I have not intended to sound antagonistic. I have felt a compulsion to bring to you the sentiments expressed by our members. We believe that a frank discussion of our mutual problems will lead to a better understanding and ultimate solution. We are determined to develop the health care program our steelworkers desire and we hope that you will join with us."

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### *Take Your Pick*

In an editorial which appeared in the March, 1949 issue of the MEDICAL ANNALS, Ben Gilbert, City Editor of *The Washington Post and Times Herald*, had this to say about the numerous fund drives:

> "The good citizens of the Washington area have become jaded with worthy causes. There is nothing wrong with the overwhelming majority of them except that there are too many. This has become evident because a number of really worthy causes have been unable to raise modest amounts of money from the general public. The multiplication of fund drives—many of them on behalf of medical causes—poses serious problems for their sponsors, the newspapers which publicize them, and the general public which is asked to contribute. It has reached a point where major fund drives must be carefully scheduled to avoid overlapping. When a new cause appears, it is confronted with the problem of getting proper space on the calendar to avoid already existing drives."

The Community Chest Campaign hardly ends in November, Mr Gilbert wrote, before the Christmas Seal Campaign heads into high gear.

January is Polio Month; Heart Month begins about St. Valentine's Day; then in succession follow the Red Cross and the Symphony Drive and so on. The consequences, he observed, were not in the best interests of the organization or the community, there being a limited amount of money available for charity.

Under the then existing system, there was no assurance that the funds raised were distributed properly. There was genuine difficulty too of separating the sheep from the goats, no knowledge of how the money was actually spent, the annoyance of continual pressure, and, finally, a question of the validity of the research for which it was claimed the money was needed.

Mr. Gilbert suggested the establishment of some central agency to screen the various fund drives. Better still, he urged that agencies should be brought within the fold of the Community Chest. However, he was not too optimistic about this possibility because of the competition which existed between the Chest and non-Chest agencies. He concluded that it would take an agency broader than the Chest to obtain the coöperation necessary to bring about a united fund drive among sponsors of health, welfare and character-building agencies.

Six years have passed since this editorial was written, during which the United Givers Fund has come into existence in an effort "to reduce the duplication of effort and expense caused by separate campaigns . . . ." One hundred and thirty-two agencies have, to date, affiliated themselves with the Fund, including the American Red Cross. However, there are still a number of agencies, among them voluntary health organizations, who are conducting independent drives. One of the reasons given for not uniting with the UGF is that their causes would suffer financially.

Your Observer is not concerned here with this reason for remaining aloof from the Fund but wishes to direct attention to the newcomers among the voluntary health agencies. There seems to be no limit to the causes where health is concerned, for hardly a month passes without there being some new entry in the field. Whatever their merit—and some undoubtedly are most deserving of support—they further increase demands made upon the public and the number of drives which Mr. Gilbert so strongly protested.

Recently a correspondent with a sense of humor delivered himself on this subject in the following communication received at the headquarters of the American Medical Association:

"For many years past I have been what might be termed an amateur student of medicine. I have also been interested more particularly in the organizations which have taken upon themselves the collection of monies to be devoted largely to the eradication of various diseases which still plague mankind.

"Lately, this matter of raising funds for research looking to the cure of some dread malady has so intrigued me that I am seized with an uncontrollable desire to start a Foundation of my own. I have an impressive roster of sponsors, including such well known names as James DeWitt Rockefeller (Local Boy), Horace Pulham Whitney (an up country lad), and many more equally famous. I have had an impressive letterhead designed by a leading commercial artist. I have an exceptionally fine mailing list of persons in the upper income brackets.

"My purpose in writing to you, gentlemen, is to plead for your assistance in one simple aspect of my plans; namely, won't you select a good disease for me? I have throught of beri-beri, pellagra, elephantiasis, trichinosis and many others, but when I look up the words in the dictionary, I always encounter some difficulty; the first three are tropical and I don't want to have to confine my efforts to the Deep South. The fourth has something to do with pigs and certainly does not have the romantic urge so sorely needed for the success of a project of this kind. I rather fancied leukemia but only recently it was taken by another group. (I always thought it was a cancer of the red blood cells but I guess I was wrong.) Do you think that "Auricular and Ventricular Fibrillation" has possibilities? It has a beautiful ring to it, a sort of poetic, rhythmic cadence, and even though it is only a mild heart condition, I doubt that many prospective donors would look it up.

"But I shouldn't be expatiating on my own ideas when I intend to be guided solely by your good advice in the matter. Might I also suggest that you name an alternate, since by the time your letter arrives, the first selection may already be taken.

"When I really have my organization in a sound financial position, I plan to underwrite what might be termed an auxiliary charity. With the continuing suc-

(*Continued on page 282*)

# TODAY'S TRENDS*

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In outlining some of the problems of Blue Shield I am reminded of an old general practitioner who, when a young woman some 30 years old who had had 11 children since her marriage asked what she should do about it, said, "Madam, set fire to the house and make your escape."

In Blue Shield we have been tempted to do just that, although as a rule the fires are set for us and we don't have to go that far.

In speaking of "Trends," which is my subject, I would remind us all that trends are the result of history. Our latter day respected philosopher, George Santayana, spoke of the fact that "he who is disposed to ignore history must be prepared to repeat it." And I think we have to bear that in mind when considering the problems that have come about through the trends of the past quarter century, affecting our profession and affecting our people.

When Newton stated the laws of motion he didn't really expect the progress in social events to fall under somewhat similar laws, but I think we have come to recognize that they do.

The changes and trends that beset us have a momentum which is not easily modified. They are not readily deflected from their course. This is an era not only of change, of trends that are important, but of changes that are accelerating. Nowhere in the world should this fact be better recognized than here in the automobile capital of the world, where the things that are being done in every factory, no matter how wonderful, are declared to be obsolete almost at the very moment that they are being done. I am sure that General Motors would be happy to have any other automobile factory copy exactly their production technics, because by the time they could be copied General Motors would be happy to announce that they were a thing of the past.

Let's consider for just a moment these trends of the past quarter century. Here, as in our everyday practice of medicine, the history is an important thing. These trends, as we examine them and see how they have affected social conditions, will inevitably affect us and control us to some degree, no matter what profession we may practice. This quarter-century interval has been one of international upheaval and of war; there have been colonial revolutions, especially in the latter part of it; there have been widespread oppressions of man, tending to emphasize the individual oppressions of man which exist everywhere, at all times. Man still is a predatory beast in many of his relations, although he is capable of ascending to a place beside the angels during his moments of generosity.

These events have all led to the need for collective effort in our large central government to try to respond effectively to some of them. People have been held together by this need, and they have been rewarded by paternalism and by the tendency toward development of the welfare state. This tendency has grown to the consternation and distress of the professions who are normally and habitually the vested interests—the conservative reactionaries who hate to see the status quo disturbed. It is not an improper thing that they should seek to preserve the status quo, because in so doing they can continue to function as a profession and continue perhaps most efficiently and most effectively for the people they are serving. For these reasons, the tendencies to reactionism, the tendencies just to preserve what we have, give us a fear of Government intervention.

With these trends are associated, somewhat incidentally, although unquestionably related, the Depression and the hard times which we remember as being part of the early section of this quarter century. The extension of the welfare state with its paternalistic tendency was, of course, magnified by the needs of the Depression. But the efficiency of the credit mechanism that was brought into being at that time caused credit buying to be expanded, and even now, at the height of a period of almost inflationary prosperity, we have credit buying coming up at an ever-increasing tempo. And here again we have this matter of accelerated change in the area of changed economy which affects us so vitally. We can't expect, if the economy of this country has become so that even the relatively well-to-do must buy an automobile or a refrigerator on time in order to pay for it, that the public is going to be able to pay for such important things as medical care on a "pay-as-you-go" basis.

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* Talk given before the Michigan State Medical Society's Annual Public Relations Seminar for County Secretaries, in Detroit, Michigan, January 25–27, 1957.

This, then, really is the background of the development of insurance and prepayment plans—a cure which the medical profession helped to develop.

We like to think of ourselves in medicine as being scientists. Sometime, not so long ago, speaking on current problems in perspective, having not so much the medical profession in mind but science in general, Charles Dollard told a little story about Frederick Lewis Allen, who for a long time was Editor of *Harper's Magazine*. It seemed that Allen roomed with a young man named Zahner at Harvard University and was continually pressed by Zahner's desire to state a law, a physical law, some law that would bear his name and would make it ring down through the pages of recorded time as having been an outstanding achievement. And amazingly enough, Zahner did succeed in his last semester at Harvard in stating this law and applying his name to it. It is an interesting law, and in the great tradition of these laws it had no exceptions; it can be tested empirically. It was only 10 words long and here it is:

"If you play with anything long enough, it will break."

Now, this rather upset Allen that Zahner should succeed and he vowed not to rest until he had achieved the equal of his friend, and he did concentrate very considerably on it for the next few months. To really prove that this must have been a marvelous team, Allen too succeeded in stating a law that was short—it was of even wider range, it had classic elegance and simplicity because it too had but 10 words, and this is Allen's Law:

"Everything is more complicated than it seems to most people."

Now Allen was too conservative; if he had been a Blue Shield man he would have cut his law to 9 words and said, "Everything is more complicated than it seems to anybody." But I think there is a little gem of meaning in these thoughts for our present situation. The only effective substitute for the socialization that we fear—and hate, you might say—is that we must establish a credit program of health coverage and make it available for most of the needs of nearly all the people. That is really what the gentlemen have been saying that have preceded me here this morning. We can't be too inflexible in the way in which this comes about. We can't be too technical about it. We must not be rigid in the classic sense. We must not try to "pull the wool over someone else's eyes" in the method we use. We can't be like the young man who murdered his own mother and father and then threw himself on the mercy of the court because he was an orphan.

The other specific subject to which I was assigned this morning, I haven't taken up yet, but I have here 3 instructions over Dr. Foster's signature. He said: (1) Show what the Government is contemplating in the way of increasing governmental benefits to the people; (2) stress the Government's role in the health field; and (this last one is the easiest of all) (3) state Eisenhower's philosophy of health benefits, and talk about others who would use his philosophy to achieve national health insurance.

Well, in a few well chosen words I will cover these points. The Government, I think we can fairly say—speaking in general terms now of attitude that has been indicated by the Administration in its acts, efforts and formal statements—is deeply interested in the expansion of voluntary coverage for these services. They want more people to have more services. They are especially concerned (and this has been emphasized repeatedly in public statements) about help for the aged, the indigent, the disabled, and the individuals who can't come into groups, especially in the rural areas. They are quite concerned, not only in the Administration but in Congress, about increasing research—adding to the area that has been called the Public Health area, and especially concerning themselves with the problems of the aging. They are establishing a division at the National Institutes of Health on this subject. They are interested in continuing aid for building and education under the Hill-Burton Act. And a special request for school construction funds will probably go to Congress within the next 3 or 4 days. And they are even, to slight degrees, arguing the special extension of services to veterans. And within the last year the Federal Government has assumed, through Medicare, the obligation to render health care to the dependents of the uniformed service men.

Now, as to the President's attitude on medical care and what can be done. It seems rather clear that the President does want it understood that he thinks private enterprise can do this job. Mr. Folsom is the principal spokesman in the Administration for this field and has said repeatedly they want no subsidy directly for health insurance, but they are willing to match local funds under such mechanisms as the extension of the Social Security Act. The one thing that we need to bear in mind is that the Government demands that progress be made in this field, and there always is the possibility, which the more pessimistic of us might consider a threat, that any lagging in this progress will cause the Government not only to step in and nudge us but perhaps take something over. Among the nudges they have given during the last few years have been the reinsurance scheme, which really nobody ever thought would do very much, except that it would get everybody "keyed" up in this field and cause some additional progress. The idea of pooling the small groups —pooling the benefit of funds of such groups as Blue Cross and Blue Shield local plans—is another of their efforts. A bill on this will probably be introduced in the next week. And, as I said, the threat that something more will be done if these things are not helpful is ever present.

I think that I might sum up in a three-point statement our duty in relation to these trends, as I see them. The first is that we study and learn as much about them as we can, and that we learn from the written word rather than from the verbal. It is nice to sit down and talk to a friend and discuss these subjects, but so often we get misinformation that way; check it by what has been written.

Secondly, I believe it is the stern obligation of every physician in private practice to support his local Blue Shield Plan and help to control it. If it isn't what he wants, it is his own fault for sitting back and letting it be messed up.

Thirdly, I think that each of us should act as a physician in support of this great profession, but especially, he should act as a man in support of humanity.

## ENFORCEMENT OF FEDERAL NARCOTIC LAWS

The following memorandum was received from Clarence H. Lutz, Deputy Chief, Metropolitan Police Department, with the request that the Medical Society bring it to the attention of its members. Because of the importance of its contents, it is being published in the Medical Annals in the hope that it will be read by the greatest possible number of physicians in the District of Columbia.

"Our problems with the physician are as follows:

1. Doctors calling narcotic prescriptions to pharmacists on the phone, which is in violation of the law. Only certain mild narcotic preparations have been exempted recently and can be filled orally by the pharmacist. Some of these are Empirin Compound up to #4, A.P.C. with Codeine; Coricidin with Codeine; Trigesic with Codeine or an equal or greater quantity of an isoquinoline opium alkaloid or salt thereof (example, Copavin). There are other items, but these cannot contain more than one grain per dosage unit.

NOTE: Paregoric requires a WRITTEN prescription by the physician, and cannot be ordered on the phone. This is in the District of Columbia. The above has been found to be violated rather frequently. The doctors that we have spoken with all say that they are not aware of the law, that they do it as a matter of convenience to themselves, so that they do not have to go out to see certain patients, etc. This is a bad practice and can be abused to a point where it can get out of hand.

2. Doctors submitting prescriptions for narcotics to the pharmacists, in person, and receiving the narcotics themselves. This has been noted on many occasions and investigations resulted in finding doctors who were addicted to the use of narcotics. An admonition along this line would help; although it is not a violation of the law, it is believed to be unethical. In case of an emergency, we can understand the procedure and are not interested in this part.

3. Doctors improperly writing narcotic prescriptions. Doctors writing prescriptions should be sure they contain all information as required by law, especially the FULL name of the patient and COMPLETE address. Example—not J. Smith, Cameo Hotel, D. C.; J. Doe, Washington, D. C.; and J. Doe, Kramer Apt., D. C. The responsibility to cor-

rect such prescriptions is left up to the pharmacist, if he fills the prescriptions. However, the pharmacist does not have to fill the prescription if it is not correct.

4. Doctors maintaining the addiction of the addict. A doctor cannot *maintain* the addiction of an addict, but he can *treat* an addict. The treatment of an addict will show a decrease in the amount of narcotics prescribed. Example: During a conversation with a doctor, he stated that he did not know what to do with a patient who was using a large amount of narcotics which he (the doctor) was prescribing. The doctor further stated that the patient was not addicted before coming to him, but since his treatment of this patient's asthma, the narcotics have been increased. This particular doctor is writing 240 c.c. of Demerol every 6 days and does not see the patient. The patient's maid comes to the office twice a week and gets the prescriptions. We feel that this is an excessive amount of narcotics for any person. This is merely one case; there are many others. We believe the doctors should be alerted in reference to the control of the amount of narcotics prescribed.

5. Doctors improperly ordering narcotics for office use. Doctors are to obtain their office supplies on Bureau of Internal Revenue order forms as prescribed by law, and not on prescriptions with patients' names. This has been done rather frequently, and in one case the doctor stated that he knew nothing of the order forms and thought the procedure was correct.

6. Doctors leaving SIGNED prescription pads with pharmacists. This is a strict violation of the law and unethical. Needless to say, this practice could result in a very dangerous situation.

7. Doctors predating prescriptions for patients. There have been several occasions where narcotic prescriptions have been issued to a patient predated. That is, a patient comes to a doctor requesting a prescription for a narcotic drug. The doctor will issue 3 or 4 prescriptions at the same time, and, for his own convenience, date these prescriptions in advance. The patient may then get confused and have the wrong prescription filled, which is in advance of the date itself. This is a violation of the law."

## CANCER SOCIETY OFFERS AID FOR CHEMOTHERAPY

Financial aid to needy patients for chemotherapy in the treatment of cancer is being offered by the District of Columbia Division of the American Cancer Society. This service includes aid for chemotherapeutic agents of proven worth and the necessary laboratory studies related to use of these agents. Radiography is not included. The aid is limited to $200 per patient.

Referrals for this aid may come through tumor clinics at the following hospitals: Children's, Garfield Memorial, George Washington University, Georgetown University, and Freedmen's. Application may also be made by a private physician. All applications will be reviewed for eligibility by a physician on the Cancer Society's Service Committee, of which Dr. Paul B. Cornely is Chairman.

The aid is available to ambulatory as well as to hospitalized patients who are being treated in the District of Columbia and who reside in the Washington Metropolitan Area.

The chemotherapeutic agents approved by the committee at this time include: minopterin, minoanfol, amethopterin, nitrogen mustard tri-ethylene melamine, myleran, 6 mecaptopurine, urethane, stilbestrol, premarin or related estrogenic substance, testosterone, methyltestosterone, thiotepa (limited to breast cancer and lymphoma), cortisone, hydrocortisone, prednisone, prednisolone, and adrenocorticotrophic hormone.

Further information and application forms may be obtained from Miss Helen Margaret Rogers, Director of Service for the D. C. Society, Executive 3-3690.

# THE DEPENDENTS' MEDICAL CARE PROGRAM*

MAJOR GENERAL PAUL I. ROBINSON, M.C., U.S.A.

*Executive Director, Office for Dependents' Medical Care*

The Dependents' Medical Care Act, which was enacted June 7, 1956, "to create and maintain high morale throughout the uniformed services by providing an improved and uniform program of medical care for members of the uniformed services and their dependents" (Sec. 101 Public Law 569, 84th Congress), has had less than 4 months' experience in operation. These have been busy months for all who have been trying to meet the problems as they arise with some degree of intelligence. It is much too early for anyone to make a positive statement as to the effect of the program on morale. The degree of participation of our dependents in the program cannot be accurately determined. Therefore, it seems appropriate that we discuss the program as it now exists and try to point out the problems which are facing us.

The Office for Dependents' Medical Care is essentially divided into two sections, one which deals with you as contractors and the other which deals with those we serve—the Army, Navy, Marines, Air Force, Public Health Service, Coast Guard, and the Coast and Geodetic Survey. The whole office, of course, is responsible to those who have delegated authority—the Surgeon General of the Army, the Deputy Chief of Staff for Logistics, the Chief of Staff, the Secretary of the Army, and the Secretary of Defense.

In the hospital part of the program, my office deals directly with the Blue Cross Commission which, in turn, deals with the individual plans. In the physician part of the program, my office deals directly with the Blue Shield plans in various states, Hawaii, and the District of Columbia. Both the Blue Shield Plans and my office have a source of advice in the medical association or society of the area.

### Blue Cross Problems

Blue Cross, as you know, administers the hospital part of the program in 31 states, Alaska, Hawaii, Puerto Rico, and the District of Columbia. As of March 20, 1957, 9,738 bills for hospital payments had been received in the Office for Dependents' Medical Care from the Blue Cross Commission. These amounted to $897,681.17. We have been informally advised that bills in the amount of $2,500,000 are in process. The average cost to the Government per hospital case in a small sample has been $92, and, of course, the patient has paid $25 or more additionally to the hospital. Billing has been a bit slow, we think, but we know also that there have been difficulties in so far as forms, punch cards, and other details are concerned, and these have contributed to unavoidable delays. We must all exert every effort to make billings more prompt, for until my office receives the billings we are unable to determine the extent to which the program is being utilized; nor do we know whether physicians and hospitals are being paid, and nothing could hurt the program more than to have a reputation for slow payments.

Some of the problem areas which face us all in the hospital field are worthy of special discussion.

*Nurse Anesthetists.* At the inception of the program, it was thought that the great majority of the nurse anesthetists were employees of hospitals and that hospitals would include their services as part of the hospital bill. However, it appears that there are many nurses who are "free lance" anesthetists, or who give anesthetics for a certain surgeon or group of surgeons. The hospitals do not normally bill for them, nor, in fact, do the physicians. They cannot bill separately as the program is designed. There is no fee schedule covering their services because the published schedule is for physicians. Ordinarily, throughout the Nation their usual fees are much lower than those for physicians. We have pursued this problem on the basis that the hospital should pay the nurse anesthetist a normal and reasonable fee when she is not an employee of the hospital and place the amount paid on the hospital bill for reimbursement. We hope this can become a usual procedure and that we will not have to enter into special arrangements for payment of nurse anesthetists.

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* Delivered at the Annual Conference of Blue Cross-Blue Shield Plans in San Francisco, Calif., March 24, 1957. Portions relating to contractural problems have been deleted.

*Other Anesthetists.* Dentists and osteopaths who do not qualify as physicians have submitted bills for administration of anesthetics. We also believe the best way to pay them is through the hospital as outlined for nurse anesthetists.

*Physical Therapists* also are sometimes not paid members of hospital staffs and desire to render separate billings. When their work is accomplished in the hospital we greatly desire the hospital to pay them a reasonable fee and place it on the hospital bill for reimbursement.

Some of the *Clinics* which also operate qualified hospitals under the program are having difficulty billing because they cannot readily differentiate between what are normally hospital and physicians' charges. Special studies are under way to resolve this problem.

Many *Institutions* which do not meet the definition of a "hospital" feel they should be eligible for participation in the program. These range from large institutions for care of tuberculosis and mental diseases to small 1- or 2-bed infirmaries where patients are held overnight for certain examinations or treatments. In view of the fact that emergency conditions can be treated in any such institution we have adhered to the Directive definition of a "hospital."

Problems concerning *Accommodations* have been a cause of much correspondence. The law and the Directive provide for semiprivate accommodations. Some of the finest hospitals in our Nation have no semiprivate accommodations. Some hospitals, usually the smaller ones, have only single bedrooms. Some have only rooms of more than 4 beds. Physicians have been encouraged to place our patients into hospitals where semiprivate accommodations are available. Sometimes, for many reasons, this is impracticable, and patients are placed in single rooms or in wards in these particular hospitals. We are sure that the Congress did not intend that the patient would have to stand the cost of her hospitalization just because she was placed in a ward or a single room when semiprivate accommodations were not available. We have authorized payment of bills for ward accommodations with certain information forwarded to our office in order that we can have knowledge where variations have been necessary. Where single rooms are furnished for the convenience of the hospital, we feel the Government should be charged rates which would be comparable with semiprivate accommodations if they were available and have so indicated in individual correspondence. Further studies are being conducted in this area.

## BLUE SHIELD PROBLEMS

Blue Shield Plans service the physicians in 32 states, Hawaii, and the District of Columbia. As of March 1, 1957, 9,523 bills have been received from 29 Plans, covering 26 states, Hawaii, and the District of Columbia, and totaling $673,915.56. The average cost per claim is approximately $72. Six states have not yet been heard from. Billings have been slow and we hope for greater promptness in the future. An analysis of 5,000 cases submitted from several states indicates that a large part of the early business of the program was for maternity care, tonsillectomies, and for general medical and pediatric care.

Because of the volume of *Maternity Care* and the fact that so many occurrences can happen in the period of pregnancy, the subject has been one of great concern to us all. ODMC Letter No. 5, which is quite detailed, seems to have been of great assistance and the volume of individual correspondence on this subject is much reduced.

The majority of the problems in the Blue Shield sphere of interest are, as we would expect, in the professional areas. Most problems are in those areas where it was impossible to be definitive in the Directive.

Care for *Chronic Diseases and Elective Surgery* is not provided. In both areas, however, the Directive indicated that a liberal interpretation was desired. For example, we consider that surgery for strabismus and cleft palate is authorized by the Directive so long as the physician believes the correction of these defects are indicated for the health and well-being of the patient. In fact, hospitalization and medical care in these areas are considered allowable if the physician feels that a surgical procedure or a certain medical therapy is indicated for the life, health, or well-being of the patient. Domiciliary or nursing care, a rest in the hospital, surgery desired by the patient but not medically indicated, in the opinion of the physician, are not provided for in the program. The physician, therefore, has a great responsibility in determining what is and is not allowable under these indefinite areas in the program. Since most of these conditions present no urgency, there is always time for inquiries to be made, and we welcome such inquiries in the Office for Dependents' Medical Care.

The authorized care for patients with *Tuberculosis* has been covered in ODMC Letter No. 2 and there are now very few inquiries on this subject. In general, if a patient with tuberculosis is contagious, has an acute exacerbation, needs surgery or is acutely ill, she is eligible for care under the program. If she just requires nursing and domiciliary care she is not eligible.

The matter of care for *Acute Emotional Disorders* has been more difficult of solution. Patients so afflicted are usually emergencies. They may be suicidal or homicidal, disoriented or unconscious, and must have care before time for any correspondence. The Directive provides for care until such time as the patient can be transferred. Many of these cases, however, can be returned to their homes in a matter of 3 to 6 weeks; therefore, it does not seem reasonable to require the transfer of such patients to a state or municipal mental hospital. Some cases require 2 to 4 weeks' hospitalization and observation for diagnosis and determination of requirement for further hospitalization. Obviously, this time should be allowed. In many cases, the sponsor may have to be recalled from an overseas station to enter into the necessary legal processes in connection with hospitalization in a state institution. Frequently, our patients are not located in their home states and the resident state is hesitant or even reluctant to accept them. All of these contingencies require time and an endeavor has been made to allow for them. ODMC Letter No. 8 outlines the procedure for hospitalization of cases under the Dependents' Medical Care Program. Briefly, this letter provides for care up to 21 days without question and outlines a procedure for obtaining extensions beyond 21 days for the reasons mentioned.

By and large, our office is of the opinion, from a review of the billings received, that there has been very little unnecessary hospitalization. There is evidence, however, that some (including physicians) feel that it is only necessary for the patient to be hospitalized in order for the Government to be financially responsible for her care. We have had letters from physicians protesting our requirement for hospitalization; all of these we have answered to the effect that physicians' fees or hospital costs for those conditions which are ordinarily treated on an outpatient status are not a proper charge against the Government. We have had a few bills for such items as blood counts, urinalysis, and similar tests on a patient who was placed in the hospital presumably for these tests and nothing more and, of course, we have had to disallow all payments to both the hospital and physician. We had one letter from an allergist stating that he saw no reason why he had to hospitalize patients to accomplish skin tests. And again, we told him that even if he did hospitalize patients solely for skin tests that both his fee and the hospital charges would not be allowable because such tests are ordinarily accomplished on an outpatient basis and do not fall within the scope of the program. It is hoped that all of you will be persistent is passing this information along and in disallowing such unjustifiable claims.

### SCHEDULE OF FEES

Your group is particularly interested in the *Schedule of Allowances for Physicians' Fees*. There are wide variations in our negotiated fees. Our office, in the negotiation period, avoided making comparisons of one state with another. We used, as guide, a calculated schedule based on the relative values in the study made in California. We also used the Blue Shield schedules from many states. The Dependents' Medical Care Program cannot now be said to be fostering a national fee schedule although I think we must all recognize the possibility of a universal fee schedule if each state in future negotiations endeavors to bring those items for which it has lower fees up to those in another state which are higher. If the schedules of allowances are maintained to represent the normal charges of physicians in the states, and if the states persistently review these rates and request adjustments both up and down when the schedule does not represent normal charges, then we will not have a national fee schedule. Furthermore, if these schedules are revised from time to time as provided in the contract we will have met the objective of keeping the fees normal for a state. The fee schedules alone constitute a subject which could be discussed for several hours. Their development, of course, must be by evolution.

### TECHNICAL PROBLEMS

There are many problems which involve both the Blue Cross and the Blue Shield Plans.

The *Identification Card* has been revised. It will now have a photograph. And every dependent above the age of 10 will have a card. It is expected that this will be in the hands of dependents by July 1, 1957, but, if not, the program will continue as it is and you will all be notified. You can well understand that the distribution of this card world-wide in 7 uniformed services represents quite a problem in itself.

The *Claim Form* is admittedly complicated. Many have told me that 50 per cent of the physicians' forms are sent back for additional information. Even at that, too great a number are reaching my office with obvious errors. The branch of service may be inaccurately recorded; diagnoses many times are incorrect and not in accordance with the nomenclature book; retired dependents have been allowed care; more that 1 physician has billed on the same form; the block indicating that the patient is living apart from her husband because of the exigencies of service is often inaccurately recorded; and there are many other irregularities. There is no way in which the hospital claim form and the physician claim form can be brought together. The hospital's form does not list the name of the physician nor does the physician's billing name the hospital. Only the patient's name is on both forms and filing is not accomplished by the name of the patient. We think the form must be revised. We believe consideration should be given to adopting at least three forms—one for the hospital, one for medical and surgical cases, and one for maternity cases. You will all have communications from us in the near future for suggestions and we hope you will call upon your experience with DA Form 1863 in making your comments and recommendations.

There are many matters which I could have discussed in detail. Army, Air Force, and Public Health Service dependents feel that Public Law 569 has taken a great deal away from them since it has limited dental care to that which is adjunctive to medical care. A study will soon be undertaken in conjunction with the American Dental Association to adjudicate this problem. We have had complaints from a number of our dependents to the effect that they have had to pay an additional $25 hospital admission charge when a patient has had to be readmitted for hemorrhage following an operation. This occurs most often in tonsillectomy and gynecologic cases. This problem is also under study.

This presentation must have left you with the impression that our program for care of dependents is nothing but problems. But, I hope that you all believe they are solvable because we believe so. We will, at the proper time, propose certain changes to the Directive and the Law governing the program. We have up to this time resisted changes pending the accumulation of experience.

The program affects a great many hospitals and a great many physicians but does not affect any one of them to an appreciable degree. Information concerning the program must of necessity be extremely widespread, and as far as the individual physician or hospital is concerned, this information must almost become a reference work because of the few times it may be used each year. In spite of this, the total amount of money received from the program by physicians and hospitals each year will be several millions of dollars. In mobilization, this amount could be increased manyfold. The program is being utilized by our dependents and there is already a noticeable decrease in the maternity case load in uniformed services hospitals. Since the patient has free choice between civilian and uniformed service facilities there is now open competition. Personally, I feel that the uniformed services will acquit themselves well and I believe this competition will be constructively beneficial to the quality of medical care both in civilian and uniformed services hospitals. This is a new kind of program where the patient pays a stipulated share and the Government pays the remainder. It has been in operation less than 4 months but the experience already gained indicates that it is a workable program.

Before closing I want to pay tribute to all of you who have worked so diligently in this relatively new field of hospital and medical care plans because, without the work you have done and the "know how" you have furnished, our program for dependents' medical care would have been much more difficult to administer.

# On the Lighter Side

May, which is properly considered the flower month after April's showers, is also the month when the casual fisherman begins to sense the inner stirrings associated with the feel of hook, line and sinker. May is usually warm enough—especially after our cold, blustery March and April—to allow our week-end Izaak Waltons to be tempted to push out into the rivers and into the Bay looking for a place to drop their lines. The breeze, if any, is less violent, the waves are less turbulent, and the sun's rays more warming and friendly to our doctor fishermen who are coming out of the cocoon of winter's hibernation.

Our fair-weather angler has checked over his lines and his reels, and we hope that he has checked over his boat. For without the boat, he cannot get to those depths of water where the fish feed, and therefore must content himself by fishing from the banks, the bridges, or by relying upon the favors of his boatmen friends.

If your boat has been outdoors all winter covered with a tarpaulin it is in better condition than if it had been stored indoors where the wood and the seams might have dried out too much. But May is here—so don't wait too long before taking off the tarp, because the very first warm day will raise the temperature inside the hull to a point where the heat and the humidity combined with poor ventilation may cause dry rot to start.

Be sure to shake the tarp free of all debris before folding it neatly and storing it away for your future use when again cold weather descends upon us.

Check your boat very carefully from stem to stern and make a mental note of what repairs or refinishing has to be done; then give your boat a thorough cleaning inside and out. Use plenty of soap and warm water over the entire boat, but remember you must be careful not to use strong cleansers on varnished areas. On the glossy painted surfaces and on the flat painted areas a good detergent can be used and might be necessary if there are oil stains present. This scrubbing may dull the gloss but it will save you elbow grease when you sandpaper the hull before applying your spring coat of paint.

If you have used flat white paint topsides and fisherman's red on the bottom and you wish to change the color, you can take off the paint in jig time by dissolving a cup of trisodium phosphate in a 3-gallon bucket of water. Use a pair of your old office examining room rubber gloves and your wife's best scrub brush and go to it, applying the solution from keel to topsides in that order. If the solution runs down the sides while you are working, don't worry; the solution will begin to soften the paint and you will not have to scrub so hard on those spots. Wash all the surfaces thoroughly with running water, or douse repeatedly with bucket after bucket of water. Then let your boat dry thoroughly before attempting the refinishing job, because any dampness in the wood will cause your new paint to blister, crack and peel and thoroughly spoil the looks of a job well done.

Always use marine paint when refinishing your boat. The manufacturers have taken great pains to put thorough directions on the label; therefore, in order to get a professional result, follow the directions carefully. Remember that flat white paint will continue to look clean all summer due to its shedding action, but has to be repainted more often. Glossy white, on the other hand, is very durable but is more difficult to keep clean, and often turns slightly yellow with age.

Make sure all cracks, holes and separated seams are filled and closed before applying the finishing coat of paint. If necessary to apply 2 or more coats, sandpaper the surfaces with fine sandpaper between coats. You will be surprised how good your job will look when properly done.

Now you are ready for the launching. Have good sport and good fishing!

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Chuckle note: When a woman lowers her voice it is a sign that she wants something. When she raises it, it is a sign that she didn't get it. . . . There is only one way to handle a woman. The trouble is nobody knows exactly what it is. . . . No man is completely worthless to his mother-in-law. She can always use him as a horrible example!

J. Earl Kadan, M.D.

# News and Personals

## MEETINGS—Past and Future

Plans are well under way for the **American Medical Association's 106th Annual Meeting,** to be held this year in New York City, June 3–7. Approximately 18,000 physicians from all over the country are expected to participate in this annual postgraduate course in medical education. The Coliseum, New York's new exhibition hall, will be the focal point of the scientific program. Headquarters for the House of Delegates will be the Waldorf Astoria.

Officers of the Medical Society who will attend meetings of the House of Delegates are Drs. Raymond T. Holden and Victor R. Alfaro, delegates to the AMA, and Theodore Wiprud, Secretary.

For the first time in medical history two medical conventions on different continents will be in direct, two-way communication. On June 5, beginning at 10 a.m. (EDT), doctors in New York's Carnegie Hall and members of the medical profession in London attending the Harvey Tercentenary Congress, at the Great Hall of the Royal College of Surgeons, will discuss "The Results of Cardiac Surgery." This unusual feature has been arranged by Smith, Kline & French Laboratories.

**Dr. William L. Garlick,** Chairman of the Graduate Training Program of **Mercy Hospital, Baltimore,** announces a Postgraduate Course in Electrocardiography, to be held at the Hospital, June 10–14. Coördinator of the faculty is Dr. Henry J. L. Marriott, Chief of the Electrocardiograph Department, Mercy Hospital. Guest speakers will be Dr. Robert P. Grant, of the National Heart Institute; Dr. William R. Milnor, Johns Hopkins Hospital; and Dr. Leonard Scherlis, University of Maryland. Registration fee is $10 and tuition, $65. Closing date for registration is May 27.

The next dinner meeting of the **Jacobi Medical Society,** to be held at the Willard Hotel, May 20, will feature a talk on "Medical Criminology" by Dr. Milton Halperin, Deputy Medical Examiner for the City of New York.

At the previous meeting, April 29, Drs. Joseph E. Murray and Warren R. Guild, of the Peter Bent Brigham Hospital and the Harvard Medical School, Boston, were guest speakers. The subject they spoke on was "Current Clinical and Laboratory Studies on Skin and Kidney Homotransplantation."

The Jacobi Society held its Annual Banquet on March 30 at the Hotel Statler. About 400 members and guests heard an interesting talk by Senator Henry M. Jackson, of Washington, on what he observed during his recent trip to Russia. A number of distinguished guests were present for the occasion. Banquet chairman was Dr. Harold Sterling, and in charge of the program was Dr. Jack J. Rheingold.

**The Jefferson Medical College Alumni Association of D.C.** will hold a dinner meeting, Thursday, May 23, at the Army-Navy Club, at 7 p.m. Reservations can be made with Dr. Adolph A. Friedman, 703 Farragut Medical Building, telephone District 7-5870.

A number of Washington physicians were in Boston, April 8–12, to attend the **38th Annual Session of the American College of Physicians.**

Dr. Wallace M. Yater, Secretary-General of the College, presided at the morning session, April 10.

Dr. Benjamin Manchester, Assistant Clinical Professor of Medicine, George Washington University School of Medicine, was one of the speakers at the first General Session, April 8. The title of his paper was "The Value of Continuous (1 to 10 Years) Long Term Anticoagulant Therapy." At the third General Session, April 10, Dr. George E. Schreiner, Assistant Professor of Medicine and Director of the Renal Clinic, Georgetown University Medical Center, spoke on "The Identification and Clinical Significance of Casts."

In a Symposium on Diseases of Intestinal Absorption, April 9, a paper on "The Differential Diagnosis of Pancreatic Insufficiency and the Malabsorption Syndromes" was given by three staff members of Georgetown University School of Medicine, namely, Dr. B. J. Duffy, Jr., Assistant Professor of Medicine; Dr. D. A. Turner, Assistant Professor of Biochemistry; and Dr. R. J. Coffey, Professor and Director of the Department of Surgery.

Dr. A. B. C. Knudson, Director, Physical Medicine and Rehabilitation Service, Veterans Administration, contributed to a Symposium on Rehabilitation, April 11, by discussing "Physical Medicine and Rehabilitation: Effectiveness and Progress in Restoration of the Chronically Ill and Aging."

**The American Academy of Pediatrics** closed a very successful three-day meeting at the Sheraton-Park Hotel, April 3, with a registration figure of over 2,600. Dr. Preston A. McLendon was General Chairman of the meeting and Drs. William S. Anderson and William F. Burdick, Co-chairmen.

Dr. Edgar P. Copeland, Emeritus Chief of Staff, Children's Hospital, made the opening remarks at the first session, April 1.

Members of the District Medical Society contributed a number of papers at these meetings. A list of them follows:

"Gamma Globulin Levels in Children with Repeated Infections," Dr. J. William Oberman

"Hyperbilirubinemia without Rh Sensitization," Dr. Sanford Leikin

"What Happens to Children with Sickle Cell Anemia?" Drs. Roland B. Scott and Angella D. Ferguson

"Simplified Fluid Therapy," Dr. Joseph M. LoPresti

"Primary Tuberculosis," Dr. Sol Katz

"The Pediatrician's Responsibility to the Bronchospastic Child," Dr. James J. Feffer

"Accidental Estrogen Ingestion in Children," Dr. Roy Hertz

Dr. Monroe Romansky described some of the newer antibiotics in a Panel Discussion on Newer Aspects of Infectious Diseases, Antibiotics and Immunity, moderated by Dr. Sydney Ross.

Other panel topics and moderators were: "The Handling of the Usual Crises in Early Personality Development," Dr. Reginald Lourie; "Fitness of American Youth—Whose Responsibility?" Dr. George Maksim; "Newly Isolated Viruses and Virus Vaccines," Dr. Robert H. Parrott; and "Some Controversial Aspects of Infant Feeding," Dr. John A. Washington. In a panel discussion on "Mental Retardation, the New Pediatric Challenge," Dr. Frederic G. Burke spoke on "Diagnosis."

In the scientific exhibit, the following exhibits were prepared and shown by members of the Medical Society and co-workers at various institutions:

"A Comprehensive Attack on Cerebral Palsy," Drs. Pearce Bailey, Henry Imus, and William Windle, National Institute of Neurological Diseases and Blindness, and Drs. Nicholson Eastman, George W. Anderson, and David Clark, Johns Hopkins University and Hospital

"Chronic Lead Poisoning in Infancy and Childhood," Drs. Walter E. Ahrens, George J. Cohen and Frances K. Millican, Children's Hospital

"Non-radiopaque Foreign Bodies in Tracheobronchial Tree," Drs. Isadore Lattman, George Wm. Ware and Joseph M. LoPresti, Children's Hospital

"The Primary Reticuloendothelioses," Drs. Joseph M. LoPresti, Preston A. McLendon, and Francis Mastrota, Children's Hospital and George Washington University School of Medicine

"Evaluation of Hearing in the Young Child," Dr. Allan E. Walker, Jr., and Edna K. Monsees, Hearing and Speech Clinic, Children's Hospital

"Pediatric Anesthesia," Drs. C. E. Fierst, F. J. O'Bryan, and R. H. Dewitt, Children's Hospital

"Strabismus," Drs. Frank D. Costenbader, Marshall M. Parks, Dan G. Albert, and Nicholas G. Pistolas, Children's and Episcopal Eye, Ear and Throat Hospitals

"Sickle Cell Anemia in Children. X-ray Findings," Drs. Roland B. Scott, Angella D. Ferguson, T. Wilkin Davis, and Henry T. Carrington, Howard University College of Medicine and Freedmen's Hospital

"ABO Erythroblastosis—a Common Entity," Drs. Sanford L. Leikin and Jack J. Rheingold, D. C. General Hospital and George Washington University School of Medicine

"Pectus Excavatum," Drs. Brian Blades, Owen Gwathmey, and Paul C. Adkins, George Washington University Hospital.

**The Pan American Association of Ophthalmology** held its Fourth Interim Congress, **and the National Society for the Prevention of Blindness,** its Annual Meeting conjointly in New York at the Hotel Statler, April 7–10. Addresses of welcome were given by Dr. Frank B. Berry, Assistant Secretary of Defense for Medical Affairs, and Major General Dan C. Ogle, Surgeon General of the U. S. Air Force, both Honorary members of the District Medical Society.

Dr. John H. King, Jr., of the Washington Clinic, was one of the scientific exhibitors. An exhibit on

"Preservation of Corneas for Lamellar Keratoplasty" was prepared by Dr. King, with Lt. Colonel J. W. Passmore and Lt. Colonel J. N. McNair, of Walter Reed Army Medical Center. Drs. Conrad Berens and Arnold S. Breakey, of New York, with Dr. King, presented an exhibit on "Steroid Therapy."

**The 46th Annual Meeting of the International Academy of Pathology and the 54th Annual Meeting of the American Association of Pathologists and Bacteriologists** were held consecutively, April 8–10 and April 11–13, at the Hotel Statler.

The D. C. Medical Society was represented by one scientific paper read before the Association meeting, April 11, on "Histologic Effects of ThioTEPA on Malignant Tumors," by Drs. Oscar B. Hunter, Jr., and C. Barrie Cook.

Heading up various local committees for these meetings were Dr. Frank W. Konzelmann (Public Relations), Dr. Thomas M. Peery (Registration), Dr. William C. Manion (Scientific Sessions), and Dr. Richard E. Palmer (Reception and Entertainment).

**The Section on Otolaryngology of the D. C. Medical Society** met, March 12, at the Army-Navy Club. Following the business meeting, Dr. Alexander MacMillan, Chief Roentgenologist of the Massachusetts ENT Dispensary, was the speaker; his subject was "X-ray Diagnosis of Nose and Throat Disease." Twenty members of the Baltimore Section on Otolaryngology were present to make this meeting one of the highlights of the year.

The following officers were elected to serve during 1957–58:

Dr. James J. McFarland, *President*; Dr. Edward M. O'Brien, *Vice President*; Dr. Morris E. Krucoff, *Secretary*; and Dr. Max J. Fischer, *Treasurer*.

**The Section on Ophthalmology** held a dinner meeting, April 9, at the Kennedy-Warren. Guest speaker was Dr. George R. Merriam, Jr., of the Institute of Ophthalmology, New York City. The subject of his address was "Radiotherapy in Ophthalmology."

The new **Section on Internal Medicine and Allied Subspecialties and the District of Columbia Society of Internal Medicine** met in the Medical Society's Auditorium on April 2. At this meeting, details for completing final formal organization of these two groups were worked out. Dr. Henry D. Ecker is Chairman of the Section and President of the Society.

**The Section on Neurology and Psychiatry** met in the Medical Society's Library, April 4. Two papers were presented to the members. The first was "Problems in Diagnosis of Multiple Sclerosis," by Drs. Marvin C. Korengold and Paul Chodoff, later discussed by Dr. J. G. Greenfield, and the second, "Spinal Fluid Enzyme Changes in Multiple Sclerosis," by Drs. J. D. Green, H. Oldewurtel, and F. M. Forster.

**The International Medical Club of Washington** met at the Mayflower Hotel, March 23, to honor Dr. Percival Bailey, distinguished Professor of Neurology and Neurosurgery, University of Illinois College of Medicine. Dr. Bailey is Honorary President of the International College of Neurological Surgery.

Dr. Henry L. Darner, President of the Club, welcomed members of the Pan American Medical Society who were present. Dr. Arthur A. Morris, Secretary, introduced the guests at the head table, and Dr. James W. Watts, the guest of honor.

A short business meeting was held at the close of the program and the following officers were elected:

Dr. William H. Jenkins, *President*: Dr. William F. Burdick, *First Vice President*; Dr. James W. Watts, *Second Vice President*; Dr. Donald Stubbs, *Third Vice President*; Dr. Arthur Morris, *Secretary*; Dr. Oscar B. Hunter, *Treasurer*; and Dr. A. B. Bennett, *Historian*.

Elected to the Board of Directors were Drs. Darner, Robert Choisser, Hill Carter, and George B. Trible.

**The Washington, D. C. Chapter of the American Federation for Clinical Research** held its regular meeting in the Medical Society's Library, April 8. Six papers were read at the meeting. Drs. Monroe J. Romansky and J. Robert Holmes, of George Washington University School of Medicine, presented a paper on "Successful Short Term Therapy of Enterococcal and Staphylococcal Endocarditis with Ristocetin." Drs. John J. Canary, Laurence H. Kyle and Richard J. Meyer, of Georgetown University Medical Center, were authors of a paper entitled, "A Comparative Study of the Effects of Different Thyroid Preparations on Nitrogen Balance." Drs. Romansky, Kyle and Meyer are members of the District Medical Society.

**The Washington Academy of Neurosurgery** held its second dinner meeting of the year at the Kenwood Country Club, March 29. Two prominent Washington attorneys, Messrs. Joe Bulman and Harry Welch, addressed members of the Society on the subject, "The Medical Witness."

**The District of Columbia and Maryland Chapters of the American Academy of General Practice** sponsored jointly a **Medical Seminar** at the National Institutes of Health in Bethesda, May 16. It was an all-day session, held in the Main Auditorium of the Clinical Center.

Two members of the Medical Society of D. C., both staff members at the National Cancer Institute, took part in a Panel Discussion on Some Current Concepts in Cancer. Dr. Robert R. Smith, Chief of the Surgery Branch, spoke on "Metastatic Carcinoma of the Breast," and Dr. Roy Hertz, Chief of the Endocrinology Branch, discussed "Therapy of Hormone-producing Tumors."

**Dr. Richard W. TeLinde,** Professor and Chief Gynecologist at Johns Hopkins Hospital, Baltimore, addressed professional personnel, April 8, in the Medical Society's Auditorium on "Cancer of the Cervix." This lecture was the fourth in a series sponsored by the Professional Education Committee of the **District of Columbia Division, American Cancer Society,** which is chairmanned by Dr. Theodore Winship.

**The District of Columbia Dental Society** met at the Shoreham Hotel, April 9. The program for the evening consisted of a Panel Discussion on Tranquilizing Drugs and Other Drugs Used in the Practice of Dentistry. Dr. Daniel F. Lynch, Associate member of the District Medical Society, was moderator. Among the panelists were Drs. Charles S. Coakley, Professor of Anesthesiology at George Washington University Hospital, and Dr. Bernard J. Walsh, Associate Professor of Clinical Medicine at Georgetown University.

## GENERAL NEWS

At the regular meeting of the **Executive Board of the Medical Society of the District of Columbia,** March 21, approval was given to a recommendation of the Committee on Medical Education Fund that the amount shown on the Society's 1958 membership dues statement as a voluntary contribution to the Medical Education Foundation be increased from $20 to $25.

Dr. Alfred E. Brigulio has submitted his resignation as Chairman of the Committee on Emergency Medical Service of the Washington Metropolitan Area. The Board confirmed President Caulk's appointment of Dr. James E. Chapman to succeed Dr. Brigulio.

**Dr. George Maksim,** Chairman of the **Committee on Public Information,** has sent a letter to the membership requesting **nominees for the John Benjamin Nichols Award for 1957,** to be presented to a lay person or lay organization, or both, in recognition of unusual enterprise or exceptional service in the interest of better health for the people in the District of Columbia. The award, consisting of a bronze plaque, will be presented at the luncheon for members and visiting physicians on October 14, the first day of the 26th ANNUAL SCIENTIFIC ASSEMBLY. Nominations should be sent to Dr. Maksim at 1718 M Street, N. W., before June 1, 1957.

**Dr. C. K. Fraser,** Chairman of the Medical Society's **Obstetrical Board,** advises that any member of the Society is welcome at meetings of the Board. To be placed on the mailing list for notices of meetings, please telephone Mrs. Evelyn DeBray in the Society's Executive Offices (DIstrict 7-3111). The Board meets on call, the third Monday of the month at 8 p.m. in the Medical Society's Auditorium. The next meeting will be held in June.

Further selections have been made, in recent elections, to head departments of the new **Washington Hospital Center.** Chief of the Ophthalmology Department will be Dr. G. Victor Simpson. Dr. James S. Dryden will be Vice Chairman, and Dr. C. Worth Sprunt, Secretary.

The Department of Otolaryngology will be headed by Dr. Aubrey D. Fischer, with Dr. Victor R. Alfaro, Vice Chairman, and Dr. H. King Vann, Secretary.

**Dr. John M. Orem,** President of the Board of Trustees of **Sibley Memorial Hospital,** announced the establishment of two new departments for the proposed new Sibley Hospital. The two units, not originally contemplated in building plans, are a Department of Ophthalmology, under Dr. William M. Hart, and the Department of Psychiatry, under Dr. Zigmond M. Lebensohn.

The new 350-bed hospital, designed as an integral part of American University, will devote the entire seventh floor to the two projected units. The eye-treatment section will have 30 beds plus a clinic for outpatients. The arrangement will make possible a training program for eye surgeons, according to Dr. Hart. Dr. Hart is Associate Professor of Ophthalmology at Georgetown University School of Medicine and Consultant in Ophthalmology to Walter Reed Army Institute of Research.

The psychiatric unit will have 28 beds, according to present plans. Dr. Lebensohn expects to offer special treatment for the problems of the adolescent and pastoral training in psychiatry for local clergymen. He is particularly pleased that this area of medicine is beginning to get its due recognition. Dr. Lebensohn is Clinical Professor of Psychiatry at Georgetown University School of Medicine.

**A new chapel at Mount Alto Veterans Administration Hospital** was dedicated in special ceremonies, March 6. Volunteers from some 45 religious and service organizations in the area made the chapel possible. The first chapel at the Hospital, it will serve all denominations.

**Dr. Winchell Craig,** eminent neurosurgeon, delivered the **1957 Kober Lecture,** March 27, in Gaston Hall at the Georgetown University Medical Center. The subject of his address was "Pain." Dr. Craig has been head of the Neurological Surgery Section at the Mayo Clinic, Rochester, Minnesota, since 1946. A rear admiral in the U. S. Naval Reserve, he was chief of surgery at the National Naval Medical Center, Bethesda, from 1942 to 1945. He conducted the Graduate Training Program at the Bureau of Medicine and Surgery in 1945–46.

The Kober Lectures were established at Georgetown in 1923 by Dr. George M. Kober, who was Dean of the School of Medicine for many years.

## PERSONALS

**Drs. Hugh H. Hussey and William B. Walsh** have been appointed to a new 7-man Advisory Committee on Medical Practice Relations which will meet with Dr. Leroy E. Burney, Surgeon General of the Public Health Service, to consider PHS activities which are related to the practice of medicine. In announcing these appointments, Dr. Burney said, "With growth of medical and related research, it is increasingly important that we work with private physicians as well as with health agencies to help apply the new knowledge promptly and effectively."

At a recent meeting of the Board of Trustees of the American Medical Association, Dr. Hussey was named Alternate Delegate to the Istanbul meeting of the World Medical Association.

**Dr. Jeanne C. Bateman** was in New York City. March 29, to attend the Conference on Comparative Clinical and Biological Effects of Alkylating Agents, sponsored by the New York Academy of Science and the Cancer Chemotherapy National Service Center. Dr. Bateman presented a paper at this meeting on "Palliation of Cancer in Human Patients by Maintenance Therapy with N N′N″ Triethylene Thiophosphoramide."

**Dr. Basil Blumenthal** has been appointed Director of the Outpatient Department of Georgetown University Hospital. Dr. Blumenthal, who is Clinical Associate Professor of Medicine, has been associated with Georgetown since 1947. He received his degree in medicine from Columbia University. During World War II he held the commission of Lieutenant Colonel in the Medical Corps of the Army and served for 5 years in the United States and in Panama.

**Dr. Stafford W. Hawken** is now Chief of Staff at Columbia Hospital for Women. **Dr. H. J. Russell McNitt** was elected Deputy Chief of Staff, succeeding Dr. Hawken. **Dr. Raymond T. Holden,** a member of the Board of Directors, was elected to the Board's Executive Committee.

**Dr. Milton Gusak,** Clinical Instructor in Medicine, **and Dr. Jack J. Rheingold,** Associate in Medicine, both of George Washington University School of Medicine, were named honorary members of the Smith-Reed-Russell Society, honor society of George Washington University, at its Annual Banquet, March 20, at the Mayflower Hotel.

Dr. James A. Shannon, Director of the National Institutes of Health, addressed members and guests on the subject, "Training for Careers in Medical Research."

**Dr. C. Willard Camalier, Sr.,** an Associate member of the District Medical Society, has been awarded honorary membership in the New York Academy of Dentistry. Only two other dentists have received this honor in the entire history of the Academy. The ceremony took place in New York on March 13.

Dr. Camalier is President-elect of the American Academy of the History of Dentistry. He is Past President of the American Dental Association, the District of Columbia Dental Society and the American Association of Dental Examiners. He has practiced dentistry in the District of Columbia for some 30 years. His son, Dr. C. Willard Camalier, Jr., is a surgeon and an Active member of the District Medical Society.

**Dr. Donald Stubbs,** President of Medical Service of the District of Columbia, attended the Annual Conference of Blue Cross-Blue Shield Plans, held at the Fairmont Hotel, San Francisco, Calif., March 24–28. Dr. Stubbs addressed the session, March 28, on "Blue Shield and the Challenge of the Future."

**Dr. Worth B. Daniels,** Clinical Professor of Medicine, Georgetown University School of Medicine, was appointed by President Eisenhower to serve a one-year term on the Board of Regents of the new National Library of Medicine, which is under the administration of Public Health Service. He served for three years on the Advisory Board of the Library when it was known as the Armed Forces Medical Library.

*Dr. Daniels*

Dr. Daniels is one of 17 members of the Board of Regents which will administer the Library under a law passed by Congress last year; 10 are appointed by the President and 7 are ex officio members from the Federal Government. At its first meeting in Washington, March 20, the Board elected Dr. Daniels as its first Chairman. Dr. Champ Lyons, Professor of Surgery, University of Alabama Medical College, was elected Vice Chairman and Lt. Colonel Frank B. Rogers, Director of the Library, was designated Secretary to the Board.

One of the first problems before the Board is the site for a new building to replace the outmoded one at Seventh Street and Independence Avenue, S. W.

**Fourteen members of the District Medical Society were cited** and given silver medals for their contribution to Georgetown University School of Medicine at the University's annual Founders' Day Convocation, March 25. All of them have served part-time on the teaching staff for 20 or more years. They are:

Dr. O. Hugh Fulcher, Professor of Neurosurgery

Clinical Professors: Dr. Stafford W. Hawken, Obstetrics and Gynecology; Dr. Thomas F. Keliher, Medicine; Dr. Casimir Leibell, Radiology, Emeritus.

Clinical Associate Professors: Drs. John R. Cavanagh, Michael J. McInerney, and Stephen W. Nealon, Jr., Medicine; Dr. Thomas A. Egan, Ophthalmology; Rear Admiral B. W. Hogan, Psychiatry; Dr. Charles J. Millwater, Pediatrics; Drs. C. Edwin

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several months. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| March 12 | Dr. Calvin T. Klopp | Cancer | Optimist Club |
| March 26 | Dr. Jack E. White | Discussion of films, "Warning Shadow" and "Traitor Within" | Howard University Students |
| March 26 | Dr. Roy L. Sexton | The Pribilof Islands, illustrated with movies | Washington Sertoma Club |
| March 27 | Dr. Lois I. Platt | Discussion of film, "Breast Self-examination" | Waitresses Union Local 507 AFL-CIO |
| March 27 | Dr. Randolph K. Brown | Discussion of films, "Warning Shadow" and "Traitor Within" | Howard University Students |
| March 28 | Dr. Jacob J. Weinstein | Discussion of film, "Chemotherapy—A Research Frontier" | D. C. Pharmacists' Association |
| April 9 | Dr. George D. Selby | Glaucoma | Practical Nurses' Association of D. C. |
| April 16 | Dr. Preston A. McLendon | Teen Age Health | Mary Margaret Washington Vocational High School Parent-Teachers Association |
| April 17 | Dr. Margaret M. Nicholson | Rheumatic Fever | WTOP-TV, Donna Douglas Program |
| April 24 | Dr. Irene Tamagna | Hypertension | WTOP-TV, Donna Douglas Program |
| April 25 | Dr. Robert E. Moran | Plastic Surgery | Friendship Lions Club |
| April 29 | Dr. Winfred Overholser | The Public's Stake in Mental Health | Open lecture, St. Elizabeths Hospital |
| May 8 | Dr. Elizabeth J. Kahler | Milady and the General Practitioner | WTOP-TV, Donna Douglas Program |

McNamara and Howard H. Strine, Jr., Surgery; Dr. Paul J. O'Donnell, Orthopedic Surgery.

Dr. Leslie H. French, Clinical Assistant Professor of Medicine.

**Dr. Stewart T. Ginsberg,** Chief of the Psychiatry Division in Veterans Administration Central Office, assumed new duties, May 1, as Commissioner of Mental Health for the State of Indiana. He will also be Professor of Psychiatry at the Indiana University School of Medicine in Indianapolis.

Dr. Ginsberg has been affiliated with the D. C. Medical Society as an Associate member for the past year.

**Dr. William P. Argy,** Medical Director of the District of Columbia Society for Crippled Children, was named "Doctor of the Year" by the Georgetown University Clinical Society at its Annual Dinner, March 20.

**Dr. John McM. Mennell** was in Loma Linda, California, March 4–12, where he gave a postgraduate course of instruction at the College of Medical Evangelists on "Manipulative Technics in Diagnosis and Treatment." The following week he presented a scientific exhibit on "Joint Manipulation" at the Annual Alumni Postgraduate Conference of the College of Medical Evangelists.

On March 18, Dr. Mennell was guest speaker at the Orthopedic Club of Boston. His subject was "Manipulative Treatment and Pain in the Low Back."

Dr. Mennell, an Associate member of the Medical Society, is a resident in orthopedic surgery at D. C. General Hospital.

**Dr. Maxwell Boverman** addressed the house staff of the Henry Phipps Psychiatric Clinic of Johns Hopkins Hospital, March 28. The subject of his talk was "Opening Maneuvers in Psychotherapy of Acute Psychosis."

**Dr. Roland B. Scott,** Chief Pediatrician at Freedmen's Hospital, participated in the program of the Norfolk and Rappahannock Medical Societies, in Norfolk, Va., April 17. He discussed "Sickle Cell Anemia in Infancy and Childhood."

**Dr. Samuel M. Becker** addressed the District of Columbia Podiatry Society, April 2, at the Willard Hotel. His subject was "Medicolegal Problems in Podiatry."

**Dr. I. Phillips Frohman** will serve as Editor of the 1957 issue of J.A.M.A. Clinical Abstracts of Diagnosis and Treatment. He will also edit again the AAGP Abstracts for 1957.

**Dr. Addison M. Duval** was a member of the Planning Committee for the Citizens' Conference on Nursing, sponsored by the D. C. League for Nursing, which was held, March 21, at the Hotel Statler. The Conference brought together laymen, hospital administrators, doctors, nurses, and educators in a discussion of such urgent nursing needs as recruitment, training, and financing of nursing education.

Among the panelists on special nursing problems was **Dr. Stewart T. Ginsberg,** Chief of the Psychiatric Division, Veterans Administration.

**Dr. Robert H. Parrott,** Physician-in-chief of Children's Hospital, has been appointed to the Board of Trustees of the National Cystic Fibrosis Foundation, representing the Washington, D. C. Chapter (address: Box 4443, Washington 17, D. C.). Dr. Parrott will also represent the chapter in Harrisonburg, Va.

**Dr. George Maksim** was one of the judges for the Eleventh Annual District Science Fair, which opened April 13 at American University. The Fair included 660 exhibits by District students from the seventh through the twelfth grades. It was sponsored by the Washington Junior Academy of Sciences and the Washington science teachers. Winners competed in the National Science Fair, which was held in Los Angeles, May 9–11.

**Dr. Zigmond M. Lebensohn** gave an address before the School of Aviation Medicine at the U. S. Naval Air Station in Pensacola, Florida, March 21, on "The Psychiatric Half of Military Medicine."

**Dr. Karl Hayden Wood,** Director of Oral Surgery at George Washington University Hospital, has been elected President for 1957–58 of the Sertoma Club of Washington. Dr. Wood is an Associate member of the Medical Society of the District of Columbia.

## BOOK REVIEWS

**Sports Injuries Manual for Trainers and Coaches.** DONALD F. FEATHERSTONE, Member of the Chartered Society of Physiotherapy; Member of the Committee for Research into the Treatment of Athletic Injuries; Principal of the Athlete's Injury Clinic, Southampton; Physiotherapist to Southampton Football Club; Honorary Physiotherapist to Hampshire County Cricket Club; Physiotherapist and Trainer to Southampton Speedway Team; Late Physiotherapist to Dr. Woodard's Athletes' Injury Clinic, 80, Harley Street, London, W. 1; Late Student-Supervisor, The Prince of Wales General Hospital, London, N.W. 19; Late Assistant Physiotherapist to Garston Manor Rehabilitation Centre, Watford, Herts; Late Assistant Physiotherapist, Physical Medicine Dept., Central Middlesex Hospital, London, N.W. 10. Foreword by R. Salisbury Woods, M.D., F.C.C.S. Price, $6.00. Pp. 132. New York: Philos. Libr., 1956.

It should be of the utmost importance to every trainer and coach of sports clubs to know as much as possible about sports injuries, how to render the best possible immediate care, and how to adequately treat the inevitable injuries which occur not only in sports events but during the training periods of athletes. It is of equal importance to try to prevent sports injuries from occurring.

These aspects are fully covered in the "Sports Injuries Manual for Trainers and Coaches" by Donald F. Featherstone. The author uses a very direct and simple manner n diescribing the basic anatomy and physiology of the human body and discusses at great length the role and duties of the trainer and coach. The prevention of sports injuries, with stress placed on the psychologic factors involved in dealing with athletes, forms an important part of the book. There is also an excellent guide for the procedures to be followed in the treatment of sports injuries and for the formation and plan of a treatment room, along with a detailed discussion of remedial exercises and llustrations of apparatus necessary.

It is a practical and invaluable book for every trainer or coach of athletes to possess and to use as a guide in his dealings with the athlete.

Jacob J. Weinstein, M.D.

**The Ciba Collection of Medical Illustrations.** Volume 3. A Compilation of Paintings on the Normal and Pathologic Anatomy of the Digestive System. **Part. III. Liver, Biliary Tract and Pancreas.** Prepared by Frank H. Netter, M.D. Edited by Ernest Oppenheimer, M.D. Price, $10.50. Pp. 165, with 133 color plates. Summit, N. J.: Ciba Pharmaceutical Products, Inc., 1957.

The price of this excellent monograph in the series of the Ciba collection of medical illustrations is unbelievably low in this period of inflation, particularly with reference to prices of medical texts. The profusion of color plates in this volume and the excellence of Dr. Netter's artistic achievements have to be seen to be believed. Some of these illustrations, and indeed parts of the texts, have appeared in the house organ, *Clinical Symposia*, that Ciba publishes periodically. In this volume, however, there is drawn together a complete encyclopedia, with the superb illustrations mentioned, relative to the liver, biliary tract and pancreas. The text accompanying these illustrations has been carefully edited by a group of authorities in the fields discussed. However, the fine studied hand of a valued friend, Hans Popper, is discerned throughout the text, particularly in the section on the normal anatomy of the liver, biliary tract and pancreas and in the section on physiology and pathophysiology of the liver, biliary tract and pancreas, including hepatic and pancreatic tests. The illustrations in these particular sections are noteworthy in that they are complementary to the text and indeed clarify a difficult subject.

To the reviewer, the section on diseases of the liver is encyclopedic and worthy of detailed perusal. The illustrations by Dr. Netter harmonize with the text, which is primarily a presentation of the ideas of Dr. Popper. The single illustration of the findings in the physical diagnosis of liver disease is a teaching exercise in itself. However, it demonstrates, too, how quickly textbooks get out of date, inasmuch as the recently described findings of Dupuytren's contracture and parotid enlargement in cirrhosis are not included. In this section alone there are 56 color plates with gross and histologic sections that are superb. An outstanding feature in the illustrations is the correlation with clinical findings of the pathologic data which for so many years have been an outstanding feature of the clinical-pathologic conferences held at Cook County Hospital, Chicago, Ill., by Dr. Popper.

This is a book that any doctor in practice should have in his library, regardless of his specialty, since so many different fields are covered in the diseases described in this monograph. In addition to its medical excellence, this book as an example of the printing art also deserves recognition for clarity and arrangement of the reading material. In view of the usual cost of publications with a great many color plates, Ciba is to be congratulated in presenting this volume to the medical profession at or below the actual cost of publication.

Irving B. Brick, M.D.

**Notes on Atomic Energy for Medical Officers.** An introduction to the subject for Service and other Medical Officers who may be concerned with defence against atomic bombs and similar problems. By the Royal Naval Medical School, Alverstoke, Hampshire, England. Price, $4.75. Pp. 169, and 12 plates. New York: Philos. Libr., 1956.

These are the lectures prepared by the staff at the Royal Naval Medical School in Great Britain to provide information for medical officers on the effects of atomic weapons. While the emphasis is on the military, the treatment of nuclear physics is sufficiently clear, complete, and concise to be of value to anyone interested in an understanding of the hazards of industrial atomic energy and the medical uses of radioisotopes. The use of diagrams throughout facilitates the reading of a rather compressed text. The sections on radiobiology and genetics are particularly valuable to those not experienced in these fields.

This small book, comparable to other British writings on this subject, is the best short introduction to atomic medicine available. It should be reprinted in a cheaper edition.

B. J. Duffy, Jr., M.D.

**General Urology.** Donald R. Smith, M.D., Clinical Professor of Urology and Chairman of the Department of Urology, University of California School of Medicine, San Francisco; Consulting Urologist, San Francisco Hospital; Consulting Surgeon (Urology), Veterans Hospital, San Francisco; Chief of the Department of Urology, St. Luke's Hospital, San Francisco. Illustrated by Professor Ralph Sweet. Price, paper, $4.50. Pp. 328. Los Altos, Calif.: Lange, 1957.

Dr. Smith has presented a concise, easily read, up-to-the-minute review of the field of urology in lecture form for the student and for the medical practitioner who has not specialized in urology but desires a working knowledge of the subject. In fact, the internist as well as the urologist will find this volume of interest.

The book has 25 well-outlined chapters, with 42 full-page drawings, 27 half-page drawings, 22 full-page roentgenograms, and 24 half-page roentgenograms. The drawings by Professor Ralph Sweet equal if they do not actually surpass those of our outstanding men in the field of urologic illustration. The roentgenograms, chosen with care by his group of advisers, are well worth the urologists' review.

There are 3 chapters on examinations, physical, laboratory, and instrumental, which emphasize the importance of each in arriving at a correct diagnosis.

The chapters on Tumors of the Urinary Tract, The Neurogenic Bladder, Urinary Stones, and Nonspecific Infections of the Urinary Tract are exceptionally good, any one of which is well worth the price of the book.

The paragraphs on differential diagnosis are timely and the reader is referred to other pages in the text when indicated.

The author omits quotations throughout the entire volume but does refer the reader to the bibliography which, in my estimation, is best for the average student. Furthermore, the writer is to be commended for a work well done; the student, intern, resident, attorney or urologist will find this volume worth reading and placing in his library for future reference.

Oliver E. Thompson, M.D.

**Personality, Stress, and Tuberculosis.** Edited by Phineas J. Sparer, M.D., Professor of Psychiatry and Preventive Medicine, University of Tennessee College of Medicine. Price, $12.50. Pp. 629. New York: Internat. Univ. Press, 1956.

For many years there were 2 concepts of approach to mind-body relationships. The early psychoanalysts and those prior to World War II were so astounded by the wealth of their observations that they were preoccupied with the psychic function to the exclusion of specific physiology. They recognized body function but with a slight nod. The psychoanalysts' wealth of knowledge impressed the great group of physiologists, but the new order of psychoanalytic conceptualization so confounded them that their observations stopped with the laboratory instruments, and everything else was labeled "functional." Psychophysiology, then, was many things to many observers. Each had his own idea; each pursued the subject to the extent of his own discipline, his own frame of reference.

The need for a unified approach, the need for observation that coördinates both psychologic and physiologic without bias is currently being brought more forcefully to the attention of medical scientists.

Dr. Sparer has approached the field of tuberculosis from this rather new, philosophical, mind-body point of view. He has assembled 34 scientists embracing such seemingly diverse fields as endocrinology, sociology, bacteriology, psychology, cardiology, psychiatry, neurophysiology, and psychoanalysis. And they all contribute to formulate a concept of the "tuberculous person" who is as essential to the study as is the specific pathology. They show the need to study an illness from many etiologic standpoints with the patient and his milieu as the focus, for the human being is the host to an illness, and as such his inappropriate anxiety responses will, in part, determine his susceptibility, his physiological imbalances in every phase of the illness, and his recovery.

The book is well organized and readable. The reader is presented with all the basic considerations of tuberculosis in the first third of the book. The clinical applications of a psychiatric approach to the hospitalized patient covers the middle third, and particular problems occupy the last.

This volume certainly is not the last answer, and there are sections which are controversial; some statements could not be accepted by the vast majority of physicians. However, this book is important because it advances a philosophy not solely concerned with tuberculosis. And, in this wider sense, Dr. Sparer is giving a preview of an approach that will most certainly become universal as the multidisciplinary training of medical students and investigators continues to be considered on the broader base which is sensitive to the patient as well as his illness.

Robert P. Nenno, M.D.

**The Doctor as a Witness.** John Evarts Tracy, Professor of Law (Emeritus), University of Michigan. Author of Corporate Foreclosures, Corporation Practice, Handbook of the Law of Evidence, and the Successful Practice of Law. Price, $4.25. Pp. 221. Philadelphia: Saunders, 1957.

"The Doctor as a Witness" is only 221 pages long. It is well indexed and easily understood. It is packed with valuable information which every doctor should possess in order that he may know his privileges and obligations with relation to the law. The apprehensions of the prospective medical witness are allayed and the directions for preparation for the trial, the arrangement of fees, and conduct on the stand are all explained in detail. Other matters which have to do with malpractice, workmen's compensation, the issuance of certificates of insanity, and other pertinent information are also carefully detailed.

Since every professional act of the doctor has a relationship with the law, it is incumbent upon him to familiarize himself with laws as they affect him. This book should be in the library of every doctor from the time of his graduation. The author speaks with the authority of long practice and teaching of the law and the reader has the advantage of his personal experience and that of other eminent lawyers whom he quotes occasionally.

I have examined many writings on the subject of the medical witness and I consider this book to be the best. If its teachings are followed, the medical witness will rise in the estimation of the courts, and the suits for malpractice will be less in number and less successful.

James A. Gannon, M.D.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which in their opinion, merit comment.

**Principles of Urology—An Introductory Textbook to the DIseases of the Urogenital Tract.** Meredith F. Campbell, M.S., M.D., F.A.C.S., Emeritus Professor of Urology, New York University; Consulting Urologist to Bellevue Hospital, New York, to Variety Children's Hospital, Miami, and to St. Francis Hospital, Miami Beach, Florida; Lecturer in Urology, University of Miami School of Medicine. Price, $9.50. Pp. 622, with 319 illustrations. Philadelphia: Saunders, 1957.

**New and Nonofficial Remedies Containing Descriptions of Drugs Evaluated by the Council on Pharmacy and Chemistry of the American Medical Association.** Price, $3.35. Pp. 582. Philadelphia: Lippincott, 1957.

**Dorland's Illustrated Medical Dictionary,** 23rd edition, Including Modern Drugs and Dosage by Austin Smith, C.M., M.D., Editor, *Journal of the American Medical Association*, and Fundamentals of Medical Etymology by Lloyd W Daly, A.M., Ph.D., Associate Professor of Classical Studies, University of Pennsylvania. Editorial Board: Leslie Brainerd Arey, Ph.D., Sc.D., LL.D., Robert Laughlin Rea Professor of Anatomy, Northwestern University; William Burrows, Ph.D., Professor of Microbiology, The University of Chicago; J. P. Greenhill, M.D., Professor of Gynecology, Cook County Graduate School of Medicine; and Richard M. Hewitt, A.M., M.D., Senior Consultant, Section of Publications, The Mayo Clinic. Philological Consultants: Paul J. Alexander, Ph.D., Associate Professor of History, Brandeis University, and Harry C. Messenger, M.D., formerly Instructor in Greek and Latin, Harvard University and Radcliffe College. Price, $12.50. Pp. 1598, with more than 700 illustrations and 50 plates. Philadelphia: Saunders, 1957.

**Expectant Motherhood,** 3rd edition, revised. Nicholson J. Eastman, M.D., Professor of Obstetrics in Johns Hopkins University, and Obstetrician-in-Chief to the Johns Hopkins Hospital. Price, $1.75. Pp. 198. Boston: Little, 1957.

**The Fight for Fluoridation.** Donald R. McNeil, M.S., Ph.D. (in history). Price, $5.00. Pp. 241. New York: Oxford, 1957.

**The Ciba Collection of Medical Illustrations.** Volume 3. A Compilation of Paintings on the Normal and Pathologic Anatomy of the Digestive System. **Part III. Liver, Biliary Tract and Pancreas.** Prepared by Frank H. Netter, M.D. Edited by Ernst Oppenheimer, M.D. Price $10.50. Pp. 165, with 133 color plates. Summit, N. J.: Ciba Pharmaceutical Products, Inc., 1957.

**Battle for the Mind—A Physiology of Conversion and Brainwashing.** William Sargant. Price, $4.50. Pp. 263. New York: Doubleday, 1957.

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## SAMUEL BENJAMIN, Ph.G., A.B., M.D., F.A.C.P.

### (1896-1957)

Dr. Samuel Benjamin, well known specialist in internal medicine, died, March 28, 1957, at his home, 1360 Jefferson Street, N.W. He had been in ill health for almost a year.

Dr. Benjamin was born in Hoboken, New Jersey, June 23, 1896, the son of Mordecai A. and Minka G. Benjamin. He attended the public schools in Hoboken and St. John's Preparatory School in Brooklyn, N. Y. After graduating in pharmacy from Columbia University in 1917, he served in World War I as a medical corpsman in the U. S. Naval Reserve. After the War, he came to Washington and graduated from Georgetown University School of Medicine in 1927. He interned at Mary Immaculate Hospital in Jamaica, Long Island, and at Sinai Hospital in Baltimore, Maryland.

Dr. Benjamin later enrolled at George Washington University and received his A.B. degree in 1930. He continued his medical education by postgraduate study in pathology, electrocardiography, cardiology, internal medicine, and diabetes, the last at Harvard University in Boston in 1945.

Dr. Benjamin had practiced medicine in the District of Columbia since 1929, retiring in June 1956. His offices for many years were in the Farragut Medical Building. He served on the Draft Board as an examining physician during World War II.

He joined the faculty of Georgetown University School of Medicine in 1929 as Instructor of Clinical Medicine, and in 1938 became Associate Clinical Professor of Medicine. When he retired from this post in 1950, he received the University's Vicennial Medal for 20 years' service. While on the staff of Georgetown University Hospital, he was Chief of the Diabetic Clinic and Associate in the Cardiac Clinic. He was also on the courtesy staffs of Garfield, Emergency, Doctors, and Homeopathic Hospitals.

Dr. Benjamin became an Active member of the Medical Society of the District of Columbia in 1930. He was a fellow of the American College of Physicians, and a member of the American Medical Association, American Diabetes Association, American Heart Association, Washington Heart Association, Jacobi Medical Society, and Phi Lambda Kappa medical fraternity.

Surviving him are his wife, Mrs. Lee Katz Benjamin; a son, Lt. Mordy Benjamin, U.S.A.F., stationed at Lake Charles, La.; and three daughters: Miss Naomi Benjamin, 4007 Connecticut Avenue, N. W.; Mrs. Bruce I. Shnider, of Silver Spring, Md., whose husband, Dr. Shnider, is an Active member of the Medical Society; and Mrs. Leonard Rosenfeld, of Philadelphia, Pa.

## CLIFTON ROBERT WALLACE, M.D.

### (1884-1957)

Dr. Clifton R. Wallace, industrial surgeon, formerly of Washington, died, March 23, 1957, in Winston-Salem, North Carolina.

Dr. Wallace was born in Leesburg, Va., January 21, 1884; his parents were James W. and Adelaide W. Kelly Wallace. He attended Leesburg Academy in Leesburg, Va., and graduated in medicine from George Washington University in 1907. While still in medical school he served as Secretary to the American delegation to the Geneva Conference in 1906 that established the International Red Cross.

With the exception of a few years in Washington, he practiced industrial medicine in New Jersey from 1910 to 1924. He returned to Washington in 1924, where he was affiliated with the U.S. Public Health Service until 1929. In the 30's he was associated with the Veterans Administration Facilities in Washington and Biloxi, Miss.

From 1941 to 1944, he was Chief Medical Officer for the National Bureau of Standards. He was responsible for the medical protection of the first American scientists engaged in research leading to the development of the atomic bomb. He did pioneer research on the effects on men of the then little-known uranium. Since leaving Washington in 1948 to move to Winston-Salem, he had been in semi-retirement.

He was affiliated with the Medical Society of the District of Columbia while practicing in Washington. He resigned his Associate membership in 1948 when he moved away.

Surviving him are his wife, Mrs. Vera Wallace, of Winston-Salem, N.C., and a son, C. Robert Wallace, Jr., of 5 Glenmulen Place, Alexandria, Va. He also leaves two sisters, Mrs. Grace Harding, 3804 Veazy Street, N.W., and Mrs. Corinne Freilinger, of Baltimore, Md.

### Malformations of Heart—Wedum and Gilbert

(*Continued from page 233*)

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### Psychotherapy with Thorazine—Ridenour

(*Continued from page 236*)

an attitude of far greater tolerance toward the discharged mental patient, a greater readiness to accept him back into the community and into industry or his former occupation."

This paper provides evidence of the value of brief psychotherapy based on dynamically oriented principles in conjunction with Thorazine. The psychologic effect may be thought of as a "damping" of anxiety induced by anticipated disapproval from others. This drug-induced anxiety-free period should be utilized to effect the greatest possible change in pathologic personality defenses.

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### Take Your Pick—Observer

(*Continued from page 260*)

cess of the Salk vaccine, there will undoubtedly be many people in that field without jobs and I propose, in so far as possible, to absorb them into my organization, thus avoiding a major unemployment problem.

"It follows, therefore, that the ailments you suggest must present almost insurmountable obstacles to the research scientists, since I do not want them to arrive at a successful conclusion in a mere matter of a year or two. Such an unhappy contretemps would only necessitate a fresh start, all of which would be demoralizing to staff and contributors.

"I await with anxiety your prompt reply. Thank you!"

T. W.

"In and Out of Focus" will not appear in the June, July and August issues of Medical Annals. It will be resumed with the September issue.

# MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI *June,* 1957 NUMBER 6

# FETAL MORTALITY IN CESAREAN SECTION AT COLUMBIA HOSPITAL 1944–1955*

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*Washington*

AN ANALYSIS was made of cesarean sections from June 1, 1944 through December 31, 1955 at Columbia Hospital for Women, Washington, D.C. During this time 1,684 sections were performed out of a total of 46,178 deliveries, an incidence of 3.69 per cent (table 1). The yearly range of incidence was 3.14 to 4.35 per cent. The incidence from 1944 through 1949 was 3.31 per cent and from 1950 through 1955, 3.90 per cent. This paper will present a detailed breakdown including indications for section, fetal mortality by type of section, etiology of fetal mortality, the role of anesthesia in mortality, and a review of the literature on fetal mortality in cesarean section. For the sake of comparison the series is arbitrarily divided into 2 6-year periods, 1944–1949 and 1950–1955.

The corrected fetal mortality, 1944–1949, was 5.6 per cent; for 1950–1955 a 21 per cent decrease is seen to 4.4 per cent. Since the results in vaginal delivery are essentially unchanged, credit for the decreased fetal mortality from the high of 9.1 per cent in 1946 to the record low of 2.0 per cent (corrected) in 1955 must be given to a change in routine instituted in 1953 in all cesarean sections except for a few cases of dire emergency. The corrected mortality excludes monsters, congenital abnormalities incompatible with life, postmortem sections, and fetuses delivered under 1,500 Gm.

### ROUTINE IN CESAREAN SECTIONS

1. The patient is given a maximum of 1½ gr. barbiturate and 1/150 gr. atropine sulfate 1 hour preoperatively.
2. She is reassured that she will be asleep before any procedure is started.
3. She is brought into the operating room after all instruments have been prepared and the operating team has scrubbed and gowned.
4. While she is still awake the abdomen is prepared and draped, during which time she is reassured by the obstetrician and the anesthetist.
5. An intravenous infusion of 5 per cent dextrose in distilled water is started with a new no. 20 gauge, 1½-inch needle and 3-way stopcock.

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* This report was prepared when the author was Senior Resident at Columbia Hospital for Women, Washington, D. C.

TABLE 1

*Total Fetal Mortality at Columbia Hospital*

| | 1944–1955 | 1944–1949 | 1950–1955 |
|---|---|---|---|
| | % | % | % |
| Total deliveries | 46,178 | 20,438 | 25,740 |
| Total stillbirths | 754 (1.63) | 346 (1.69) | 408 (1.59) |
| Total infant deaths | 720 (1.56) | 299 (1.46) | 421 (1.64) |
| Total fetal deaths | 1,474 (3.19) | 645 (3.15) | 829 (3.23) |
| Total cesarean sections | 1,684 (3.68) | 685 (3.32) | 999 (3.89) |
| Total c.s. stillbirths | 43 (2.56) | 22 (3.21) | 21 (2.1) |
| Total c.s. infant deaths | 66 (3.91) | 24 (3.50) | 42 (4.2) |
| Total c.s. fetal deaths | 109 (6.47) | 46 (6.71) | 63 (6.3) |
| Maternal mortality | | | |
| Total live births | 44,704 | 19,793 | 24,911 |
| Total maternal deaths | 19 | 4 section<br>8 non-section | 4 section<br>3 non-section |
| Total maternal deaths per 10,000 live births | 4.0<br>(1:2,353) | 6.1<br>(1:1,650) | 2.8<br>(1:3,560) |

6. Six to 10 c.c. of 2½ per cent sodium pentothal is given followed by 4 to 5 c.c. of d-tubocurarine when the patient is unconscious, the mask then being placed over her face and either nitrous oxide or cyclopropane given depending on the preference of the anesthetist; the incision is started in 1 to 2 minutes (d-tubocurarine being added as needed), and delivery of the infant is accomplished as rapidly as possible (usually within 8 minutes of the start of anesthesia and within 3 minutes in many cases).

7. After delivery of the infant the cord is clamped and the infant given immediately to a resident physician or attending pediatrician whose sole duty is the immediate care of the baby.

8. The baby is placed in a preheated crib with head lowered, and the nasopharynx is gently aspirated.

9. If it is not breathing at this time, the baby is given artificial respiration by the Kreiselman resuscitator with positive pressure oxygen of 12 mm. Hg used intermittently at a rate of 16 times per minute.

10. After initiation of satisfactory respirations a no. 10 Foley catheter is introduced into the stomach and the contents aspirated.

11. After the infant is breathing satisfactorily it is transported in the Kreiselman resuscitator, the footprints recorded, and the baby placed in an incubator for 24 hours without feedings in an atmosphere of 25 per cent oxygen (in the belief that the use of low concentrations of oxygen for short periods of time has definitely decreased the incidence of retrolental fibroplasia).

## Type of Cesarean Section

The low cervical transverse incision into the lower uterine segment has become the most frequently used. It conserves blood loss, provides better peritonealization of the scar, and allows less contamination of the upper peritoneal cavity. These features result in minimal distention, rare vomiting, less postoperative morbidity, and smoother recovery. In the period 1944–1949, 434 (63.4 per cent) classical sections were done, 183 (26.8 per cent) low cervical sections, 27 (3.9 per cent) extraperitoneal sections, and 40 (5.9 per cent) cesarean hysterectomies were performed, a total of 684 sections of all

TABLE 2

*Fetal Mortality by Type of Section*

| | 1944–1955 | 1944–1949 | 1950–1955 |
|---|---|---|---|
| Classical | 67 (701 sections—9.6%) | 38 (434 sections—8.8%) | 29 (267 sections—11%) |
| Low cervical | 27 (819 sections—3.3%) | 3 (183 sections—1.6%) | 24 (636 sections—3.8%) |
| Extraperitoneal | 5 (65 sections—7.7%) | 3 (27 sections—11%) | 2 (38 sections—5.3%) |
| Cesarean hysterectomy | 10 (98 sections—10%) | 2 (40 sections—5.0%) | 8 (58 sections—13.8%) |
| Total | 109 | 46 | 63 |

types. In the period 1950–1955, 999 cesarean sections were done, of which 267 (26.7 per cent) were classical, 636 (63.7 per cent) were low cervical, 38 (3.8 per cent) were extraperitoneal, and 58 (5.8 per cent) were cesarean hysterectomies.

## FETAL MORTALITY

Tables 2 and 3 give the figures for fetal mortality by type of section and etiology of stillbirths.

TABLE 3

*Etiology of Fetal Mortality*

| Stillbirths | 1944–49 | | 1950–55 | | Total |
|---|---|---|---|---|---|
| | White | Negro | White | Negro | |
| Premature separation of placenta | 11 | 1 | 2 | 4 | 18 |
| Ruptured uterus | 2 | 0 | 2 | 1 | 5 |
| Placenta previa | 2 | 0 | 0 | 2 | 4 |
| Erythroblastosis | 2 | 0 | 1 | 0 | 3 |
| Monsters | 0 | 0 | 2 | 0 | 2 |
| Prolonged labor | 1 | 1 | 0 | 0 | 2 |
| Anoxia of unknown etiology | 0 | 0 | 1 | 1 | 2 |
| Toxemia | 0 | 0 | 1 | 0 | 1 |
| Thrombosed umbilical cord | 0 | 0 | 1 | 0 | 1 |
| Diabetes mellitus | 0 | 0 | 0 | 1 | 1 |
| Prolapsed cord | 0 | 0 | 0 | 1 | 1 |
| Infection | 0 | 0 | 0 | 1 | 1 |
| Failed forceps | 0 | 1 | 0 | 0 | 1 |
| Postmortem section | 1 | 0 | 0 | 0 | 1 |
| | 19 | 3 | 10 | 11 | 43 |

Twenty of the white stillbirths were premature, 9 were term infants. Eight of the Negro stillbirths were premature, 6 were term infants.

Table 4 gives the figures for the etiology of infant deaths.

TABLE 4

*Etiology of Infant Deaths*

| | 1944–49 | | 1950–55 | | Total |
|---|---|---|---|---|---|
| | White | Negro | White | Negro | |
| Placenta previa | 6 | 1 | 9 | 1 | 17 |
| Premature separation of placenta | 7 | 0 | 9 | 0 | 16 |
| Erythroblastosis | 2 | 2 | 3 | 1 | 8 |
| Atelectasis | 1 | 0 | 2 | 2 | 5 |
| Anoxia of unknown etiology | 1 | 1 | 1 | 2 | 5 |
| Hyaline membrane | 0 | 0 | 3 | 1 | 4 |
| Toxemia | 2 | 0 | 1 | 0 | 3 |
| Ruptured uterus | 0 | 0 | 1 | 0 | 1 |
| Congenital cystic kidney | 0 | 0 | 0 | 1 | 1 |
| Diabetes mellitus | 0 | 0 | 0 | 1 | 1 |
| Prolapsed cord | 0 | 0 | 1 | 0 | 1 |
| Bilateral hydrothorax | 0 | 0 | 0 | 1 | 1 |
| Pulmonary congestion | 0 | 0 | 1 | 0 | 1 |
| Edema of face, neck, and cerebrum | 0 | 0 | 1 | 0 | 1 |
| None | 1 | 0 | 0 | 0 | 1 |
| | 20 | 4 | 32 | 10 | 66 |

Forty-five of the white infant deaths were premature, 6 were term. Six of the Negro infant deaths were premature, 8 were term. Eliminating 2 stillbirths for weight less than 1,200 Gm., 2 for ruptured uteri and 1 for postmortem section, the fetal mortality for cesarean section resulting in stillbirth is 2.5 per cent (instead of 3.2 per cent), 1944–1949; that for 1950–1955 becomes 1.9 per cent (instead of 2.1 per cent), eliminating 2 infants for weight less than 1,200 Gm., 2 for ruptured uteri, 2 macerated fetuses, 1 for postmortem section (monster), and 1 with congenital cystic kidney incompatible with life. Similarly, the infant death rate for 1944–1949 becomes 3.1 per cent (instead of 3.5 per cent), eliminating 3 fetuses weighing less than 1,200 Gm.; that for 1950–1955 becomes 3.1 per cent (instead of 4.2 per cent), eliminating 7 weighing under 1,200 Gm., 2 hydrocephalics, 1 monster, and 1 for ruptured uterus. These figures compare favorably with Potter and Adair's of 8.7 per cent fetal mortality in 1,462 sections; Irving's of 6.8 per cent in 1,887 sections corrected for nonviables, and King's of 6.1 per cent corrected to 1.5 per cent by eliminating all but previous elective sections.[1] Lambeth[1] lists 5 points for improving infant salvage in cesarean section, 3 of which are incorporated in our routine: the physician to care for the infant in the operating room, aspirating the nasopharynx and the stomach, and continuous oxygen with incubator care for 24 hours. The other 2 are the use of regional anesthesia and allowing a trial of labor before operation when possible. This will be elaborated on later. A decrease in infant mortality at Blount Memorial Hospital from 9.3 to 5 per cent was accomplished with the use of the above management, even though that from vaginal delivery was unchanged and the incidence of section unchanged. Our experience is similar. An additional point is made of draining the placental blood into the infant at the operating table for the prevention of the shocklike syndrome often seen after cesarean section.

### Pathogenesis of Fetal Mortality

Fifty-two per cent of all infant deaths occur in the first 3 days of life, more than on the other 362 combined.[2] Fifty-three per cent of these are in infants with birth weights under 1,500 Gm. Deaths on the first day of life are natal-day fatalities and make up over one-third of all infant deaths. On the first day, and during the first 3 days, abnormal pulmonary ventilation (54.3 per cent) and birth injuries (18.2 per cent) account for most, while infection and blood dyscrasias cause an increasing number of fatalities for the remainder of the first week. After the first week infection and malformations become leading causes of death. There are 7 major anatomic causes of death in the neonatal period: (1) abnormal pulmonary ventilation, (2) birth injuries, (3) malformations, (4) infection, (5) blood dyscrasias, (6) anoxia, and (7) miscellaneous. In our series anoxia from bleeding accidents is the leading cause of stillbirths and infant deaths. The main respiratory disturbances may be abnormal ventilation with hyaline-like membrane and resorption atelectasis, extreme immaturity of the lungs, or occasionally only various degrees of atelectasis with death due to inadequate functioning of the lungs. Birth injuries are mainly those caused by intracranial hemorrhage. Prematurity is a measure of gestation, and not properly a cause of death.[2] A decrease in toxemia (and prematurity accordingly) by improved prenatal care with adequate diet and supplements, especially iron, to prevent anemia is an important factor.

Clifford[3] stresses correcting problems that may lead to asphyxia before and during delivery. Positive pressure methods of resuscitation are frequently associated with emphysema and pneumothorax, and emphasis should not be on mechanical resuscitation as by laryngoscope, but on correcting problems beforehand. A large series of autopsies on newborns did not show any laryngeal or bronchial plugging which could possibly have been relieved by direct suction. As a pediatrician he recommends close observation and treatment at the first sign of possible respiratory trouble, including aspiration of the nasopharynx by suction and postural drainage, aspiration of the stomach, no propping of formula bottles in order to avoid aspiration, inhalation of a 40 to 50 per cent oxygen atmosphere, fluids by clysis as needed, and prophylactic broad-spectrum antibiotics.

Intracranial hemorrhage as a result of birth trauma has practically disappeared from the modern obstetrical hospital, although spontaneous intraventricular hemorrhages still occur in prematures, especially the very immature ones. Prematures die of the same causes as term infants but are especially vulnerable. They represent 7 to 8 per cent of all births (7.2 per cent or 3,331 in our series) but 60 per cent of the total neonatal deaths. Prematures accounted for 80 per cent of the fetal mortality from sections in our 1944–1949 group and for 71 per cent in our 1950–1955 group.

Gold[4] discusses a relatively new term, "perinatal" mortality, which includes stillbirth and neonatal mortality. It expresses loss of life just before, during or just after birth, and encompasses late fetal deaths (over 28 weeks) and early infant deaths (under 1 week). Our series, however, includes all births from 24 weeks. Late fetal deaths may be divided into 3 large areas: maternal (20 per cent), fetal-placental-cord (38 per cent), and ill-defined or unknown causes (42 per cent). Under maternal, toxemia accounts for 50 per cent, with abnormal labor and chronic disease, such as diabetes and cardiovasculorenal, the remainder. Here prenatal care is especially important in those most prone to show a greater incidence of prematurity. These have been found to be non-white patients in general, women under 20 and especially multiparas under 20, patients delivered in municipal hospitals, Negroes delivered on wards of voluntary hospitals, and home deliveries. Other important factors in reducing infant mortality are conservative treatment of the patient with premature rupture of the membranes, hospitalizing without attempting to induce labor; expectant treatment of placenta previa to insure viability of the fetus, Rh and AB iso-immunization carried to full viability before termination of the pregnancy; and adherence to the principles of management of premature labor and delivery. Premature separation, placenta previa, prolapsed cord, erythroblastosis, and congenital malformations comprise the second group, while the third category is ill-defined. A woman who has had a premature delivery, stillbirth, or abortion in 1 pregnancy has a better than average chance of future difficulty.

Important factors in repeated pregnancy wastage are previous unsatisfactory pregnancies, uterine anomalies, and the uterine environment per se. These should be closely investigated. The incidence of malformations is fairly stationary, and these represent problems in the fields of environmental pathology and the influence of nutrition on the developing fetus during the first 8 weeks of intra-uterine life. The role of viral diseases in the first 12 weeks of gestational life in producing malformations also is becoming more emphasized, though not yet well understood.

An increased autopsy percentage at the individual hospital and community level is important in helping to understand late fetal and early infant deaths. These should be done by specially trained pathologists, and the results collated with the clinical course of the mother. Our autopsy rate for the first 6 years of this study was 41.3 per cent; for the second 6 years it was approximately 70 per cent. A final factor of importance in helping to understand, and correct, fetal mortality is "perinatal" mortality conferences at the hospital level at which the obstetrician, pediatrician, anesthetist and pathologist pool their knowledge in case studies.

Table 5 gives the mortality by weight of the fetus and infant.

TABLE 5

*Fetal and Infant Mortality by Body Weight*

| Stillbirths (Gm.) | 1944–49 | 1950–55 | Infant Deaths (Gm.) | 1944–49 | 1950–55 |
|---|---|---|---|---|---|
| 500–999 | 0 | 0 | | 1 | 2 |
| 1,000–1,499 | 1 | 3 | | 3 | 6 |
| 1,500–1,999 | 4 | 0 | | 5 | 9 |
| 2,000–2,499 | 8 | 5 | | 5 | 10 |
| 2,500–2,999 | 4 | 2 | | 7 | 9 |
| 3,000–3,499 | 2 | 5 | | 1 | 4 |
| 3,500–3,999 | 1 | 1 | | 1 | 1 |
| 4,000–4,499 | 0 | 1 | | 0 | 0 |
| 4,500–4,999 | 0 | 1 | | 2 | 0 |
| 5,000–5,499 | 2 | 0 | | 0 | 0 |
| | 22 | 18 | | 25 | 41 |
| White: 29 (72.5%) Negro: 11 (27.5%) | | | White: 51 (77.3%) Negro: 15 (22.7%) | | |

It is apparent that the majority of stillbirths occurred in the 2,000 to 3,499 Gm. weight range in both parts of the study. Also the majority of infant deaths occurred in the same weight range. This corresponds with the fact that most cesarean sections are performed at or as close to term as possible, also that in our series premature separation of the placenta was the commonest cause of stillbirths and the next commonest cause of infant deaths, second only to placenta previa.

Litchfield et al[5] advocate a routine similar to that used at Columbia Hospital, with certain variations. These are: (1) slow release of amniotic fluid on opening the uterus in order not to cause too great a pressure change for the infant, (2) holding the infant below the abdomen and allowing placental blood to drain in, (3) injection of vitamin K, 2 mg., every 4 hours for 6 doses, (4) injection of penicillin, 150,000 units, every 12 hours, with streptomycin or a sulfonamide, (5) continuous oxygen administration, discontinued every 2 minutes, and 93 per cent oxygen-7 per cent carbon dioxide to overcome the effects of too much straight oxygen, which is supersaturated with sodium lauryl sulfate, a wetting agent to carry it deep into the lungs and aid in the removal of aspirated amniotic fluid and the absorption of fluid and débris predisposing to hyaline membrane formation.

Conditions in the mother causing bleeding constitute the largest common factor of those infants who die in cesarean section. Mortality is mostly the result of respiratory distress to which these infants seem prone. Bloxom believes that cesarean section babies present peculiar problems of onset of respiration due to the failure to condition the infant by uterine contractions or passage through the birth canal.[5] Studdiford and Decker[6] refute his hypothesis. Respiration has been verified in utero in humans, and extra-uterine respirations are but a continuation of a function already begun in utero. The different character is probably due to the change in media being breathed. The term-infant suffers no greater hazard from abdominal delivery itself than from a short, normal labor and less risk than when subjected to a protracted labor. The syndrome of respiratory difficulty often seen is that of a normal-appearing infant at birth who breathes spontaneously but gradually develops respiratory distress in several hours, with costal retractions, irregular or shallow breathing, cyanosis, muscle twitching, and convulsions. In extreme degree it presents essentially the same as hyaline membrane disease. Respiratory difficulty may be essentially a mechanical problem, one of hyaline plugs or membrane formation which is not necessarily fatal and which can be resolved by absorptive and phagocytic processes in the lungs. Respiratory relief is obtained with an atmosphere supersaturated with water. Potter thinks that an increase of cerebrospinal fluid within the subarachnoid space is the cause and is related to delivery by section rather than to the condition for which the section is done.[6] Clifford,[3] however, believes that this fluid is the result of anoxia and has described it as occurring in infants delivered by section because of maternal hemorrhage from placenta previa, although Potter has not observed this in most infants who have had definite evidence of intra-uterine anoxia.[6]

Immediate clamping and cutting of the cord may be a contributing factor in fetal mortality in section by depriving the infant of a variable amount of placental blood. The suspension and drainage are recommended for prevention of hematogenic shock in cesarean section infants. King[7] states that 4 or more hours of labor before section may have some influence on neonatal mortality, but the incidence of thin scars even after low cervical incisions and before labor will make many unwilling to risk the rupture of the uterus to obtain a questionable improvement in fetal results. In line with the problem of anoxia Acken[8] presented a series in which a large part of the fetal mortality was that of prematures, and particularly those with placenta previa. This has been borne out in our experience. A comparison of the rate of premature mortality in vaginal delivery with that in cesarean showed that cesarean had almost twice the rate of vaginal. If placenta previa is excluded, however, the rate approximates that of vaginal delivery. Again our figures are in accord with this, all of which tends to suggest that cesarean section for placenta previa has an added risk for the premature infant which is increased by some other factor than the size of the infant. Maternal hemorrhage is believed to be that factor. It is difficult to estimate the extent of vaginal bleeding prior to hospitalization, and, even so, in the hospital except for the effects which the patient shows. The maternal blood loss is a factor in fetal mortality, and transfusions should be given as early as possible and as long prior to operation as feasible in order to avoid an increased risk of delivery of a premature infant with the additional problem of anoxia induced by maternal blood loss, even though the maternal blood needs are fully met. Rupture of the uterus is said to occur in about 3 per cent of sections, being twice as common in the classical as in the low cervical.

Since the maternal risks of cesarean section have been so decreased, it is argued that all women who have had a section should be delivered by section again in order to decrease maternal and fetal hazards from the presence of the uterine scar. All risks are still not gone, however, as in a small per cent rupture occurs prior to labor, and an occasional premature infant will be delivered since sections are commonly performed electively.

## Indications for Cesarean Section (Table 6)

There were 641 repeat sections. Of these, 528 were second sections, 100 were third sections, 12 were fourth sections, and there was 1 patient having her fifth section. Abdominal pregnancy is a rare complication and has been reported in a previous section, where it was assumed that the fertilized egg became attached to the anterior wall of the uterus and due to slight tissue resistance reached the scar of a previous section and extended into the free abdominal cavity.[9] There it became attached to the scar which was gradually torn open from the outside with resultant gradual hemorrhage. It is important to diagnose extra-uterine pregnancy for the life of the mother, and it may be done by X-ray examination showing extra-uterine fetus, lack of the typical changes of pregnancy in the cervix, finding the pelvis empty, and failure to induce labor. In Acken's series[8] of 272 repeated sections, there were 9 fetal deaths, including 2

TABLE 6
*Indications for Cesarean Section*

| | 1944–1949 | | 1950–1955 | |
|---|---|---|---|---|
| | First | Repeat | First | Repeat |
| 1. *Pelvic Contraction and Mechanical Dystocia* | | | | |
| a. Contracted pelvis | 183 | 121 | 228 | 222 |
| b. Uterine inertia and cervical dystocia | 14 | 8 | 32 | 20 |
| c. Malpresentations, including breech, face, brow, shoulder, transverse, posterior | 10 | 2 | 43 | 3 |
| 2. *Hemorrhagic Conplications* | | | | |
| a. Premature separation | 33 | 17 | 48 | 13 |
| b. Placenta previa | 49 | 31 | 84 | 36 |
| c. Ruptured uterus | 0 | 2 | 0 | 3 |
| 3. *Toxemia and Hypertension* | 23 | 6 | 30 | 23 |
| 4. *Fibroids* | 23 | 16 | 27 | 7 |
| 5. *Miscellaneous* | | | | |
| a. Elderly primipara (oldest 48) | 27 | 0 | 42 | 12 |
| b. Vaginal plastic | 9 | 2 | 16 | 2 |
| c. Previous myomectomy | 3 | 2 | 5 | 1 |
| d. Elderly primipara with breech | 17 | 0 | 7 | 0 |
| e. Rh negative | 12 | 6 | 2 | 3 |
| f. Ovarian tumors | 5 | 3 | 6 | 0 |
| g. Diabetes mellitus | 2 | 0 | 5 | 4 |
| h. Bicornuate uterus | 1 | 1 | 4 | 4 |
| i. Repeated stillbirths | 3 | 2 | 1 | 2 |
| j. Prolapsed cord | 1 | 0 | 2 | 2 |
| k. Rheumatic heart disease | 0 | 1 | 1 | 1 |
| l. Postmaturity | 2 | 2 | 0 | 0 |
| m. Fetal distress | 0 | 1 | 1 | 2 |
| n. Vaginal varicosities | 0 | 0 | 2 | 0 |
| o. Miscellaneous (1 time only) | 14 | 9 | 17 | 8 |
| p. None | 2 | 16 | 1 | 25 |

congenital anomalies, 3 macerated stillbirths, 2 cases of atelectasis, and 1 of gastroenteritis. None of these were premature by gestation or weight. Our series showed 19 fetal deaths in repeated sections out of 641 cases. These are presented individually in table 7.

TABLE 7

*Fetal Deaths in Repeat Sections*

| Indication for First Section | Indication for Repeated Section | Wt. (lbs. oz.) | Race | Death Section |
|---|---|---|---|---|
| | 1944–1949 | | | |
| 1. Hydrocephalus | 1. Erythroblastosis | 9, 1 | W | Infant, classical |
| 2. Premature separation | 2. Ruptured uterus | 4, 13 | W | Stillbirth, classical |
| 3. None on chart | 3. Premature separation | 2, 9 | W | Infant, classical |
| 4. None on chart | 4. Premature separation | 4, 2 | N | Infant, low cervical |
| 5. Ruptured uterus | 5. None on chart | 5, 3 | W | Infant, classical |
| 6. None on chart | 6. Ruptured uterus | 5, 5 | W | Stillbirth, Porro |
| 7. Rh negative | 7. Erythroblastosis | 6, 1 | W | Stillbirth, low cervical |
| | 1950–1955 | | | |
| 1. CPD* | 1. Elective (hyaline membrane) | 5, 8 | W | Infant, low cervical |
| 2. CPD* | 2. Ruptured uterus | 4, 3 | W | Stillbirth, Porro |
| 3. Diabetes mellitus | 3. Diabetes mellitus | 8, 7 | N | Stillbirth, low cervical |
| 4. Premature separation | 4. Prolapsed cord | 4, 5 | N | Stillbirth, classical |
| 5. CPD* | 5. Elective (thymic hyperplasia) | 5, 1 | N | Infant, low cervical |
| 6. None on chart | 6. Ruptured uterus | 6, 4 | W | Infant, classical |
| 7. CPD* | 7. Premature separation | 2, 1 | W | Stillbirth, classical |
| 8. Premature separation | 8. Ruptured uterus | 4, 9 | W | Stillbirth, classical |
| 9. None on chart | 9. Elective (atelectasis) | 7, 0 | W | Infant, classical |
| 10. Placenta previa | 10. Elective (no autopsy) | 5, 8 | N | Infant, low cervical |
| 11. Placenta previa | 11. Elective (prematurity) | 4, 7 | W | Infant, low cervical |
| 12. Placenta previa | 12. Elective (anoxia) | 5, 2 | W | Infant, classical |

* Cephalopelvic disproportion

Previous vaginal surgery, including perineal, cervical, and anterior and posterior repair prior to section made up 1.8 per cent of our series. Operation for elderly primipara was done in 4.7 per cent and for elderly primipara with breech in 1.4 per cent. In Levine's series[10] of 820 sections in 38,775 deliveries over a 20-year period cephalopelvic disproportion accounted for over one-third of the cases (44 per cent in ours), placenta previa for 15 per cent (11 per cent in ours), repeat sections plus cephalopelvic disproportion for over 50 per cent (49 per cent in ours). The section rate was 1.8 per cent compared with ours of 3.69 per cent. In many instances abdominal delivery is justified in the multipara with a history of difficult labors and difficult deliveries, after careful observation and evaluation. Repeat section is usually planned 7 to 10 days prior to the expected date of confinement. Despite the absence of pelvic examinations, labor, or exposure to infection from ruptured membranes, repeat sections seem to predispose to postoperative complications, especially ileus and wound dehiscence. Tumors obstructing labor frequently cause dystocia, although as labor progresses some may be drawn upward and over the pelvic brim. Ovarian tumors and cervical myomata rarely become displaced during labor, and elective section is done close to term. (In the above list of indications in our series those under the repeat column are the indication for the original section. Where more than 1 indication appeared on the chart as happened so often, the most important was listed.)

### Type of Anesthesia (Table 8)

Spinal anesthesia aids in the delivery of the fetus by better relaxation of the maternal abdominal muscles. This is of particular importance in the case of the premature infant where ease of delivery is so important in avoidance of trauma. The maternal tissues are subjected to less trauma when proper muscular relaxation is achieved. General anesthesia is used when spinal is refused or contraindicated. Spinal anesthesia is not used in cases of hemorrhage or most toxemias because of the lability of the blood pressure.[11] Evidence of premedication and systemic anesthesia as contributory causes of infant deaths must be analyzed to compare with the complication dictating the section. This may have played a more important role than the anesthetic agent used. This seems true in our series in which over 90 per cent of all anesthetics were of the general type. In discussing the anesthetic hazard in cesarean section, Studdiford and Decker[6] mention that the respiratory center of the fetus is especially vulnerable to analgesic and anesthetic drugs, which readily cross the placental barrier. There is evidence that barbiturates accumulate in the fetus in higher quantities than in the mother, indicating a deficient capacity to destroy them. All gaseous and volatile anesthetics depress the fetal respiratory centers even in a dosage which has no observable effect on the mother. Slight degrees of anoxemia in the mother, if maintained 30 to 40 minutes, may have a lethal effect on the fetus which is already existing under low oxygen tension prior to the onset of labor. Such effects may be produced more readily if the fetus is subjected to prolonged labor with ruptured membranes, which seems to favor the development of anoxemia. Nitrous oxide with less than 20 per cent oxygen is dangerous over any length of time; cyclopropane, even with its high per cent of oxygen, results in the delivery of a high per cent of partially asphyxiated babies,[6] a fact which may be related to the strong tonic contractions observed in the uterus under this anesthetic. This results in interference with maternal blood circulation in the placental sinuses and with gaseous exchange between it and the fetal blood.

TABLE 8
*Type of Anesthesia*

| | 1944–1949 | 1950–1955 | 1944–1955 Total |
|---|---|---|---|
| Gas | 633 (92.6%) | 908 (90.9%) | 1,541 (91.5%) |
| Spinal | 42 (6.1%) | 84 (8.4%) | 126 (7.5%) |
| Caudal | 4 (0.6%) | 5 (0.5%) | 9 (0.6%) |
| Local | 5 (0.7%) | 2 (0.2%) | 7 (0.4%) |

Two factors peculiar to the fetus prevent worse results from inhalation anesthesia. They are the absence of a carotid body reflex preventing stimulation of deep respiration by low oxygen tensions and a resultant flooding of the lungs with amniotic fluid; and the second is a marked resistance to the effects of profound anoxemia, which prevents the dire effects of deep asphyxia seen in a few minutes in adults. The carotid body reflex appears within a few weeks of birth; the capacity for resisting anoxemia rapidly disappears in the infant.

Conduction anesthesia has a special advantage in cesarean section, since it can in no way affect directly the fetus in utero, but it has definite limitations. It provides added risks in patients with a history of neurologic disease or syphilis, severe hypertension or hypotension, severe anemia, and in those with any infectious condition of the skin of the back.

Emotional antagonism on the part of the patient is also an important factor against the use of this type of anesthesia. Long periods of action are not necessary, since inhalation anesthesia may be safely superimposed once the fetus is delivered.

The use of spinal anesthesia has shown an increased number of reports associated with maternal and infant deaths. The rise of the anesthetic in the spinal canal to a high level with cessation of respiration, rapid drops in blood pressure, the development of postspinal headaches, and neurologic sequelae are but a few of the disadvantages to its use.

## CONCLUSIONS

In the early days of obstetrics when markedly deformed rachitic pelves were the main reason for doing a rare cesarean section, the decision to operate took courage because of the high maternal mortality. Recently, with broadening indications such as "rigid cervix," "high social value of the child," etc., the decision to operate is easier because of the decreased maternal risk. The finding of a straight-forward indication, however, is often a problem.[11] Several of the reasons for improved survival of both the mother and infant are: The operation is now done usually electively on a healthy patient who is a good operative risk; sulfonamide drugs and antibiotics have drastically reduced deaths from infection; timely and adequate whole blood replacement is provided; devised and standardized operative technics which provide maximum safety for the mother and infant are used; improved anesthetic methods are employed; better preoperative and postoperative care are given; early ambulation is practiced; anticoagulant therapy is available; and knowledge of electrolyte balance and amino acid therapy are now commonplace. X-ray examinations of the pelvis and fetus, carefully correlated with the clinical progress of labor, have increased the number of safe vaginal deliveries and decreased the number of unnecessary abdominal ones.

Ingraham[11] suggests that in repeat section for which the original indication was placenta previa, premature separation, or any other reason not associated with a small pelvis, the patient should have a trial of labor and precautions taken for immediate treatment of rupture of the uterus should it occur. Early vigorous treatment of toxemia will result in fewer sections for this reason. Inaccurate estimation of fetal weights and/or poor timing of the operation in repeat section may be decreased by closer observation in the last weeks with hospitalization at least 1 week prior to the expected date of confinement, and a more liberal use of a trial of labor in carefully selected cases may diminish the neonatal mortality from prematurity.

Premature separation of the placenta is now the most frequent indication for section associated with fetal death. Speedier decision to operate in premature separation and watchful waiting in placenta previa until maturation of the infant have resulted in an increased survival for the infant in these conditions. Decrease in prolonged labor prior to section has done so also, as has the increase in the use of the low flap operation with resultant drop in the incidence of complete rupture of the uterus and subsequent fetal loss. The operation should not be done in the absence of a fetal heart beat. Fetal distress is indicated by an irregular fetal heart of less than 110 per minute between contractions, and if it drops to 70 per minute or less Landesman[12] advocates immediate section. An occult prolapse of the cord, or tight cord complication, may be the cause of fetal distress, as well as a strong labor in the face of disproportion. Section per se imposes no further risk to the infant when the infant's life is not in jeopardy. In mechanical dystocia and repeat sections fetal mortality is no greater than with spontaneous vertex delivery.

Fetal results in cesarean section may be improved by not operating for macerated or known dead fetuses (without a maternal indication), speed in recognition of, and section for prolapsed cord, avoidance of prolonged general anesthesia in failed forceps, and diagnosis of anencephaly to avoid cesarean section in this complication. In addition, fetal mortality in cesarean section may be bettered by intelligent use of anesthesia with proper regard to the fetus, especially when premature or showing embarrassment, by the availability in the operating room of adequate instruments for resuscitation and individuals adept in their use, by avoidance of unnecessary primary operation thereby di-

(*Continued on page 340*)

# CLINICAL EXPERIENCE WITH MORE THAN 100 PATIENTS TREATED WITH ORINASE[*†‡]

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THE HISTORY of orally effective, blood-sugar lowering substances goes as far back as 1918, when Watanabe[1] described the hypoglycemic action of guanidine. The serious neuro- and hepatotoxic side-effects of this compound and its derivatives resulted in early abandonment of its clinical use. In 1942, Janbon[2] reported the antidiabetic properties of p-amino-sulfonamide-isopropyl-thiadiazole (I.P.-T.D.). Further experiments by Loubatieres[3] with this compound showed considerable increase in liver glycogen. The decrease in blood sugar was not observed in completely pancreatectomized dogs, but if at least one-sixth of the pancreas was present a definite action was obtained. This work was further elaborated by La Barre and Reuse[4] in 1947. Groups of animals were treated with varying doses of Alloxan. With increasing amounts of this drug the blood-sugar lowering effect of I.P.T.D. decreased and after large quantities of 150 mg. of Alloxan per Kg. no further hypoglycemic effect was noted. These observations led to the conclusion that at least some residual functioning pancreatic beta cells must be present for I.P.T.D. to have an effect.

In 1955 reports of clinical testing with a sulfonamide preparation, Carbutamide, began to appear in Germany.[5,6] Otherwise known as B.Z.55, this compound is 1-butyl-3-p-amino-benzene sulfonyl urea. Because of the delayed excretion, daily doses of 1 to 1½ Gm. were sufficient to reach a continuous sulfa level in the blood. Clinical observation by Kirtley[7] showed no definite correlation between blood level of drug and response of patient. In animal studies serious toxic effects (crystalluria, central necrosis of the liver, and thyroid enlargement) were noted with extremely high blood levels. In July 1956, Kirtley[8] told of "three deaths of patients who have been taking Carbutamide and although the findings are not clear-cut, in each instance the likelihood exists that Carbutamide (or a failure to discontinue its use after showing of depression of white cell count) contributed to the findings demonstrated at autopsy." Two additional deaths occurred in patients who had been reported as having liver involvement.[9]

As mentioned previously, most evidence points to the pancreas as the site of action. In a series of experiments reported by the Colwells[10] small doses of Carbutamide and tolbutamide (Orinase) were infused directly into the pancreas by arterial blood flow. Serial blood samples taken from the saphenous vein before, during, and after the infusion showed a definite reduction in blood glucose. The effect was greater with Orinase. Examination of the pancreas after the infusion showed no alpha cell damage, and "an edematous appearance of the beta cells was the only change noted." On the other hand, some interesting research by the Sireks[11] in Best's laboratory demonstrated an extrapan-

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[†] Delivered at the District of Columbia-Maryland Eighth Annual Regional Meeting of the American College of Physicians in Washington, D. C., January 12, 1957.

[‡] The Orinase used in this study was supplied through the courtesy of Dr. C. J. O'Donovan of the Upjohn Company, Kalamazoo, Michigan.

creatic effect in dogs. One depancreatized animal given B.Z.55 orally "showed normal fasting blood sugar levels for as long as 10 days while receiving no insulin." Best[12] later reported "this dog has now in fact been maintained on B.Z.55 alone without insulin for many weeks and the blood and urine sugars are essentially normal."

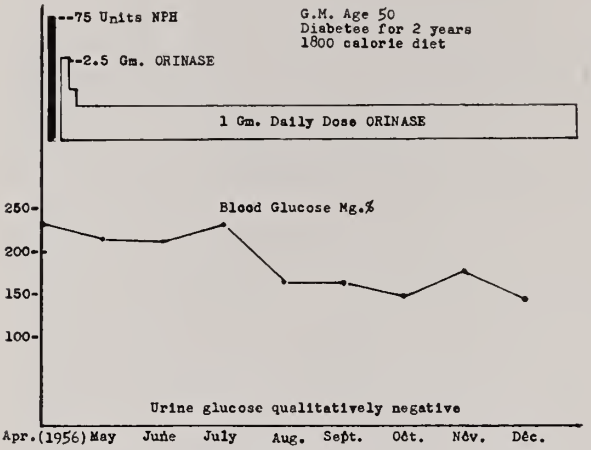

FIG. 1. Successful management of patient with Orinase after discharge from hospital.

Do these compounds have an intrahepatic effect? Lang and Sherry[13] showed an increase in hepatic glycogen during fasting "but not sufficiently to account for its rapid hypoglycemic effects." In fact, Colwell[10] injected Carbutamide directly into the portal vein and noted a hyperglycemic response. Do they act like insulin on glucose utilization by muscle? In experiments on eviscerated-nephrectomized rabbits, Wick et al[14] showed that Orinase does not accelerate plasma glucose disappearance rate, nor was there increase in glucose oxidation as measured by recovery of $C^{14}O_2$ after administration of $C^{14}$ labeled glucose. They concluded there was no direct effect on muscle. The exact mode of action, therefore, has not been clearly defined. Most evidence points to some effect on the pancreas.

Orinase is 1-butyl-3-p-tolyl sulfonylurea and is variously known as tolbutamide and U-2043. It was originally discovered and synthesized as preparation D 860 by Farbwerke Hoechst, Frankfurt am Main, Germany. My experience with this compound began in April 1956. Originally, patients were hospitalized, insulin abruptly stopped, and Orinase started the following day. The dose as recommended in German reports was 2.5 Gm. the first day, 1.5 Gm. the following day, and a maintenance dose of 1 Gm. daily thereafter. Blood sugar levels before and after breakfast were measured each day, and quantitative estimation of glucose in 24-hour urine specimens was performed. To avoid untoward results, fractional urinalyses for sugar and acetone were made before meals and at bedtime by the ward nurses. At the first sign of ketonuria insulin was given. Control was considered good if the average morning blood sugar was below 200 mg. per ml. and the 24-hour urine glucose was less than 15 Gm.[15] If control appeared inadequate the dose was increased by 0.5 Gm. increments up to 4 Gm. per day. When patients seemed to be doing well they were given a supply of Orinase, advised to test urines at home, and discharged, to be followed in the outpatient clinic. The course of a typical successful result is shown graphically in figure 1.

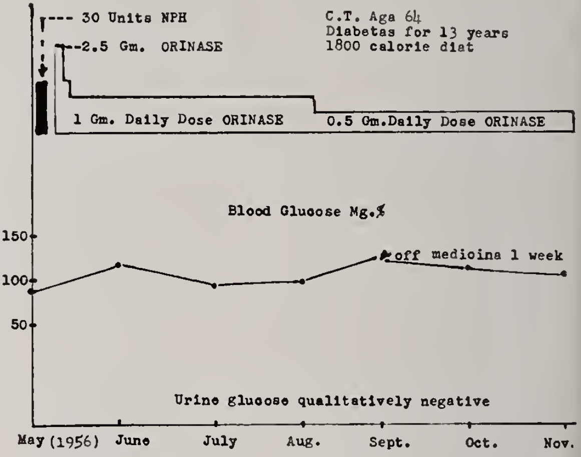

FIG. 2. Excellent control of diabetes with 0.5 Gm. of Orinase daily in outpatient clinic.

As experience with Orinase grew, patients were placed directly on the drug in the clinic. The dose was kept the same, insulin was stopped, and the patients were advised to test the urine at least twice daily; if persistent glycosuria or acetonuria was observed, they were to start insulin immediately. Figure 2 illustrates an excellent clinical response. This patient was able to reduce the maintenance dose to 0.5 Gm. (1 tablet) daily. Glycosuria reappeared when Orinase was stopped completely for 1 week. An occasional patient remained well controlled as long as 2 months after Orinase was discontinued altogether (figure 3). When a patient failed to respond to Orinase alone, insulin was added to the daily regimen but in reduced amounts. This required adjustment of dosage to obtain the optimal effect (figure 4). In an effort to compare the action of Orinase to the blood-sugar lowering effect of insulin, a recently discovered diabetic patient was given glucose tolerance tests before and after a 2.5 Gm. dose of Orinase. As noted in figure 5, there was a general lowering of blood glucose, but the characteristic curve of diabetes was retained. As time went on this patient made an excellent response to a daily dose of 1 Gm.

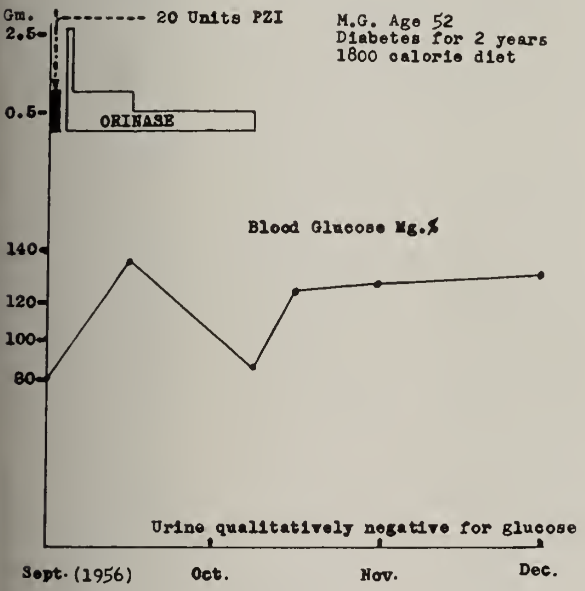

FIG. 3. Good control continuing after stopping Orinase.

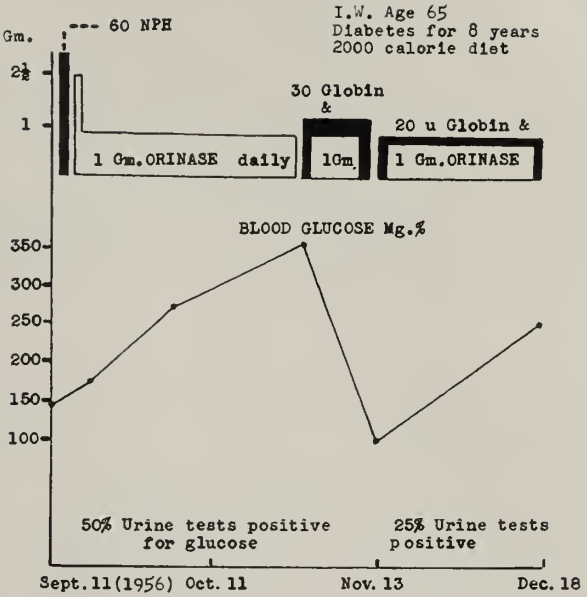

FIG. 4. Failure to convert with Orinase alone. Attempt to control with reduced amount of insulin and Orinase.

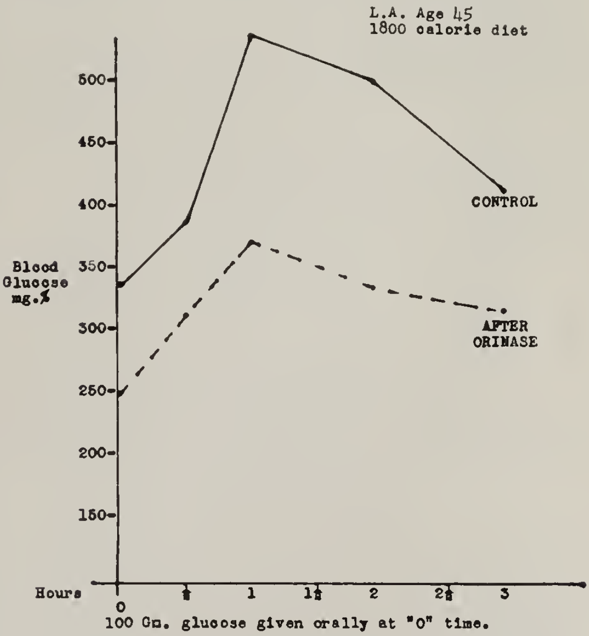

FIG. 5. Glucose tolerance tests in a new diabetic before and after 2.5 Gm. Orinase (oral).

A total of 131 patients have been treated with Orinase. Ninety-eight of these (75 per cent) have been satisfactorily managed. More success was observed in those who had not received insulin previously but who were inadequately controlled on diet alone (table 1). Best results were noted in patients over the age of 40 whose known existence of diabetes was less than 10

TABLE 1
*Results of Treatment*

| | |
|---|---|
| Number of patients previously treated with insulin | 106 |
| Satisfactory control with Orinase | 78 (73%) |
| Number of patients not on insulin and with poor control on diet alone | 25 |
| Satisfactory control with Orinase | 20 (80%) |
| Overall total number of patients treated | 131 |
| Satisfactory control with Orinase | 98 (75%) |

years and who were taking less than 40 units of insulin (table 2).

TABLE 2
*Analysis of Patients Treated with Orinase*

| Age | No. Treated | No. Successful | Per cent |
|---|---|---|---|
| 0–19 | 4 | 0 | 0 |
| 20–39 | 12 | 7 | 58 |
| 40–59 | 61 | 50 | 80 |
| 60–80 | 54 | 41 | 76 |
| Duration of Diabetes (years) | | | |
| 0–4 | 67 | 54 | 80 |
| 5–9 | 35 | 28 | 80 |
| 10–14 | 15 | 7 | 47 |
| 15–25 | 14 | 9 | 64 |
| Insulin dosage (units) | | | |
| 0–19 | 55 | 43 | 78 |
| 20–39 | 47 | 37 | 78 |
| 40–59 | 15 | 11 | 73 |
| 60–85 | 14 | 7 | 50 |

As previously reported,[16] side-reactions were mild (table 3). Prominent was a tendency to gain weight, which was observed in almost a third of the patients. The 1 patient with leukopenia was closely observed. Orinase was stopped. After 1 week with no medication diabetic control remained good and the white blood cell count rose to 8,500. The drug was given again when glycosuria reappeared. There was no recurrence of the leukopenia. The blood sugar estimated at the time of the hypoglycemic symptoms failed to show marked lowering, but relief was obtained by eating. No suppression of $I^{131}$ uptake by the thyroid gland was noted. No unusual effects on the kidneys or liver were seen.

TABLE 3
*Side-reactions to Orinase*

| | No. of Patients |
|---|---|
| Rash and itching | 6 |
| Intercostal neuralgia | 2 |
| Nausea | 3 |
| Leukopenia (1,800) | 1 |
| Hypoglycemic symptoms (anxiety, hunger, sweating) | 7 |
| Weight gain (1 to 4 lbs.) | 48 |
| | — |
| Total | 67 |
| Number of patients treated | 131 |

## CONCLUSIONS

The exact mode of action of Orinase is not completely known. Experimental evidence indicates probable stimulation of the beta cells of the pancreas. Seventy-five per cent of the 131 patients studied were satisfactorily controlled with Orinase. No serious side-effects were observed. Most prominent was a tendency to gain weight. Best results were noted in middle-aged patients with relatively recent onset of diabetes requiring less than 40 units of insulin. Orinase is not an insulin substitute. When ketosis appears insulin must be used.

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(*Continued on page 340*)

# ORAL PREPARATIONS OF ANTIDIABETIC AGENTS*

## Report of a Fatal Case

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IN THE PRECEDING paper Dr. Sugar[1] has presented clinical experience with the new oral antidiabetic sulfonylurea derivatives. Although he used Orinase and we have had experience with Carbutamide only, results with these drugs have been essentially the same.[2, 3] Even though they are capable of reducing the hyperglycemia and glycosuria of many diabetic patients, it is still pertinent to ask whether they actually benefit the diabetic. The mere saving of 30 to 40 Gm. of urinary glucose per day is of little consequence if the basic underlying metabolic disorder of diabetes is not favorably altered. Until the mechanism of action of the sulfonylurea derivatives is better understood their usefulness in the long-term management of diabetes mellitus must remain questionable.

Much experimental work has been done in an attempt to elucidate the mechanism of action of these drugs. The purpose of this paper is to review the experimental work and, in addition, to report a case of hypersensitivity to Carbutamide with fatal outcome.

Table 1 lists the various possible sites of action of the sulfonylurea derivatives. At the present time the experimental data are not entirely consistent with any single one of these possibilities.

Early reports from Germany suggested that these drugs exerted a hypoglycemic effect as a consequence of alpha cell destruction.[4] However, subsequent work has failed to confirm this finding.[5] Measurement of blood and urinary 17-hydroxycorticoid levels has failed to reveal any alteration in the function of the pituitary-adrenal system which could account for the hypoglycemia.[6] It has been shown that the radioactive iodine uptake and protein-bound iodine are reduced by these drugs, but even so the hypoglycemic action precedes these thyroid effects by several weeks.[7]

TABLE 1
*Possible Mechanisms of Action of Sulfonylurea Drugs*

1. Antagonizes anti-insulin factors
   a. Glucagon—$\alpha$ cells of pancreas
   b. Pituitary—adrenal axis
   c. Thyroid
2. Decreases destruction of insulin—anti-insulinase
   a. Augments the action of insulin
3. Increases production of insulin
4. Acts like insulin in periphery
5. Reduces glucose output by liver by inhibiting
   a. Glucagon and epinephrine action
   b. Glucose-6-phosphatase

If these drugs are to have a physiologic basis for their use in diabetes, they should act like insulin or increase the effective amount of insulin in the body. This could be achieved in several ways. They could increase the production of insulin by the pancreas, decrease the destruction of insulin in the body, augment the action of a given amount of insulin in the periphery, or finally behave physiologically like insulin in the periphery. That these drugs are somehow related to insulin production is suggested by the clinical observation that they are effective only in those patients or experimental animals who still have some functioning $\beta$-cell tissue left.[2, 3] Haist[8] has reported that when normal rats are given Carbutamide there is a significant increase in islet tissue. Colwell and his colleagues[9] have noted that amounts of Carbutamide which are insufficient to produce hypoglycemia when given into the femoral artery or portal vein of dogs did produce hypoglycemia when injected into the pancreatic artery. Some experimental data are cited below which do not support an increased production of insulin as the mode of action of these drugs.

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* Delivered at the District of Columbia-Maryland Eighth Annual Regional Meeting of the American College of Physicians in Washington, D. C., January 12, 1957.

TABLE 2

*Effect of Insulin and Carbutamide on Glycogen Deposition of Rat Hemidiaphragm*

| Material Used with Treated Diaphragm | Treated Diaphragm micromoles (glucose equivalent) per Gm. tissue Mean ± S.E.M. | Control Diaphragm micromoles (glucose equivalent) per Gm. tissue Mean ± S.E.M. | Insulin Effect micromoles (glucose equivalent) per Gm. tissue Mean ± S.E.M. |
|---|---|---|---|
| Carbutamide 2 mg. | 16.63 ± 0.74 | 16.29 ± 0.90 | 0.34 ± 0.76 (6)* |
| Insulin 0.2 unit | 23.54 ± 0.97 | 17.24 ± 0.82 | 6.29 ± 0.59 (25) |
| Insulin 0.2 unit + Carbutamide 2 mg. | 18.50 ± 0.95 | 15.60 ± 1.05† | 2.90 ± 0.70 (18) |
| Insulin 0.2 unit + Carbutamide 0.2 mg. | 15.65 ± 1.71 | 10.74 ± 1.26† | 4.91 ± 0.74 (9) |
| Insulin 0.2 unit + Sulfadiazine 2 mg. | 17.37 ± 1.11 | 15.44 ± 1.69‡ | 1.93 ± 1.35 (6) |

* Number of determinations are shown within parentheses.

† Control hemidiaphragm also treated with Carbutamide.

‡ Control hemidiaphragm also treated with sulfadiazine.

This table is reprinted with the kind permission of the Society for Experimental Biology and Medicine from the article by Field and Woodson.[13]

Mirsky[10] has presented evidence that these drugs inhibit the liver enzyme system, insulinase, which is capable of destroying insulin. There are several objections to this theory which make it unlikely that insulinase inhibition is the mechanism of action of these drugs. The concentrations of drug which Mirsky used to obtain insulinase inhibition were much greater than those which are capable of producing hypoglycemia. When smaller concentrations are used, no inhibition of insulinase is found, although hypoglycemia is induced.[11] If insulinase inhibition were important in the mechanism of action of this compound, one might expect these drugs to lower the insulin requirement in all diabetic patients, unless the enzyme system differentiates between endogenous and exogenous insulin. Furthermore, except for the lowering of the blood sugar there is no evidence that these drugs increase the amount of available insulin in the body or have a peripheral effect similar to that of insulin.[12] Insulin increases the arteriovenous glucose difference indicating increased peripheral utilization of glucose and also increases the glycogen deposition in muscle. The sulfonylurea derivatives do not increase the arteriovenous glucose difference,[12] nor do they have an insulin-like effect on muscle.[13]

Table 2 summarizes results of studies done on the effect of Carbutamide on glycogen deposition in muscle.[13] It will be noted that the hemidiaphragm exposed to insulin deposited 6.29 micromoles of glycogen/Gm. of tissue more than the control hemidiaphragm similarly treated except for the addition of insulin. Carbutamide by itself does not produce such effect. In fact, when Carbutamide and insulin are used together in doses similar to those used by Mirsky,[10] there was actually an inhibition of the insulin effect. This inhibition is thought to be due to a nonspecific protein poisoning action, since it was also seen when sulfadiazine was used but not when smaller doses of Carbutamide were given.

During insulin-induced hypoglycemia there is a rise in the blood pyruvate level, while during the hypoglycemia produced by sulfonylureas the pyruvate concentration either does not change or even falls.[14] All these observations suggest that these drugs do not act by increasing the available insulin in the peripheral tissues.

Decreased production of glucose by the liver has also been implicated as a cause of the sulfonylurea-induced hypoglycemia. Such a mode of action would be entirely consistent with the clinical observation that the fasting blood sugar value is more influenced than postprandial values. Anderson,[15] utilizing hepatic vein catheterization, has shown a reduction in the glucose output of the liver following sulfonylurea administration. In the liver, glycogen is hydrolyzed to glucose-1-phosphate by the action of phosphorylase. Both epinephrine and glucagon are known to increase this reaction in the direction of glucose-1-phosphate by activating phosphorylase. In in vitro studies Vaughan[11] has observed an inhibition of this effect of epinephrine and glucagon by Orinase which might account for reduced glycogenolysis by the liver. However, the physiologic significance of this observation is not clear, since diabetics who respond to the sulfonylureas still have the expected hyperglycemic response to glucagon and epinephrine.[16]

In the liver, glucose-1-phosphate is isomerized to glucose-6-phosphate which is then hydrolyzed to glucose by the enzyme, glucose-6-phosphatase. A decrease in the concentration of this enzyme after the administration of the sulfonylurea drugs has been reported.[17] However, in these studies the hypoglycemia has usually appeared before the reduction in glucose-6-phosphatase activity. If the main site of action of the sulfonylurea drugs is in the liver, it still leaves unexplained their lack of effect in all diabetics and the necessity for the presence of some endogenous insulin-producing tissue before hypoglycemia is obtained.

## Toxicity to Carbutamide

In addition to the lack of knowledge concerning the mechanism of action of these drugs the problem of toxicity has not been clearly settled. This problem is illustrated by a case of fatal hypersensitivity to Carbutamide observed by us.[18] As a result of this and other similar cases further clinical trials with Carbutamide were discontinued.

### REPORT OF A FATAL CASE

The patient was a 48-year-old woman whose diabetes was discovered in 1954. She had discontinued insulin 1 year ago because of local reactions at the site of injections. Her only complaint was pruritus vulvae. Except for some obesity physical examination was within normal limits. Laboratory examination revealed the hemoglobin to be 12.7 Gm. and the white blood cell count to be 4,100 cells with 43 per cent polymorphonuclears per cu. mm. of blood, 54 per cent lymphocytes, 1 per cent monocytes, and 2 per cent eosinophils. Urinalysis showed no albumin, 3 plus sugar, and countless white blood cells in the sediment. Fasting blood sugars ranged from 202 to 230 mg. per 100 ml. of blood. Liver function tests were normal except for 14 per cent bromsulfalein retention in 45 min. During a control period her 24-hour glycosuria averaged 13.6 Gm., the fasting blood sugar was 211 mg., and the postprandial blood sugar was 232 mg. Carbutamide was given for 7 days in dosages of 2.5 Gm. and then increased to 4 Gm. per day. Glycosuria decreased to 3 Gm. per day, the fasting blood sugar to 139, and the postprandial blood sugar to 165 mg. No change in liver, kidney or adrenal function was observed during this time. Her white blood cell count on the eighth day of treatment was 4,300, with 31 per cent polymorphonuclears, 59 per cent lymphocytes, 4 per cent monocytes and 6 per cent eosinophils. The blood level of Carbutamide was maintained at approximately 15 mg. per ml. of blood. She was discharged on 4 Gm. of Carbutamide per day. Urine tests for sugar at home remained negative.

Eight days following discharge she noted fever, chills, anorexia and back pain. The physical examination was unchanged, but because of a urine sediment loaded with white blood cells she was thought to have a urinary tract infection and was given an injection of penicillin and streptomycin. Over the next 3 days her symptoms disappeared. When she was seen again her blood sugar was 126 mg. and the Carbutamide level was 13.6 mg. However, the white blood cells numbered 2,500 with 21 per cent eosinophils. Unsuccessful attempts were made to have her stop the Carbutamide. The next day she suddenly collapsed and died.

At autopsy the heart showed interstitial myocarditis with infiltration of eosinophilic polymorphonuclear leukocytes. The liver showed chronic inflammatory cells in the portal areas and some miliary granulomata with giant cells. There was no caseation. The portal lymph nodes showed similar lesions. The kidneys showed eosinophilic polymorphonuclear infiltrates. The final diagnosis was sudden death probably due to hypersensitivity to Carbutamide.

The pathologic features of this case are very similar to those that were reported in the 1940's in cases of death due to sulfonamide sensitivity.[19] The features of fever, leukopenia and eosinophilia are also compatible with this diagnosis. It thus seems that this patient died from Carbutamide hypersensitivity. So far no deaths have been reported from Orinase, but this drug has not been used for as long nor as widely as Carbutamide.

At the present time the exact place of these drugs in the armamentarium of the physician treating diabetes is not known. However, because of their potential toxicity and limited usefulness to patients who might well get along with dietary control alone, it is apparent that the long sought after oral antidiabetic agent is yet to be found.

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# OPERABLE CONGENITAL MALFORMATIONS OF THE HEART*

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## PART II. PRESCHOOL AND SCHOOL AGE

CONGENITAL malformations of the heart have been estimated to be present in 0.83 per cent of all children born.[54] Before the era of cardiac surgery about one-fifth of these infants survived to school age.[55] It is a conservative estimate that there are about 60,000 children of preschool and school age with congenital heart disease. Prior to the first report of the successful ligation of a patent ductus arteriosus in 1939[56] cardiac anomalies were not considered to be operable. At the time of this writing there are only a few congenital malformations, in children who survive to preschool or school age, which are not amenable to surgery, provided that operation is performed at an appropriate time.

The same great care in taking a history and doing a physical examination in infants should be exercised in children. Every examination of a "cardiac" child should include a complete pediatric evaluation. Special procedures such as catheterization, angiocardiography and aortography should not be done unless they are definitely indicated. The mortality from angiocardiography in experienced hands has run from 0.38[57] to 1.0 per cent,[58] and, although catheterization is a safer procedure, it is not one which should be performed unnecessarily.[59] The physical examination of the preschool or school-aged child differs from that of the infant in several particulars. It is usually best to first evaluate the child from a pediatric standpoint and then to concentrate finally on the cardiac evaluation. The pulses should be carefully checked and the presence of differential cyanosis in the hands and feet observed. It is essential that the character, duration, pitch and transmission of murmurs with the child recumbent be noted, and in particular the effect of exercise on murmurs when an atypical ductus is suspected. Inspection of the chest for a precordial bulge and careful palpation for the presence of a thrill are important. It cannot be emphasized too often that the history should be taken and the examination performed with meticulous care in order to differentiate the lesions which are rare or complicated.

The division of these children into cyanotic and acyanotic groups is a convenient one clinically. However, since most acyanotic patients can become cyanotic when certain changes in the hemodynamics of the circulation occur, no broad classification on this basis will be attempted.

### PATENT DUCTUS ARTERIOSUS

A patent ductus arteriosus is a persistence of a communication between the pulmonary artery and the aorta which is present in fetal life. Normally the ductus is closed at about 3 months of age, the obliteration beginning at the pulmonic end.

In all large series the incidence has been much greater in girls. The history is usually that of a child whose growth and development have been entirely normal and in whom the lesion has been discovered only in the course of a routine physical examination. Symptoms of increased fatigability and slight dyspnea are occasionally present. If the ductus is large there may be poor growth and development, frequent respiratory infections and possibly episodes of "pneumonia" (congestive failure) in infancy. In uncomplicated patent ductus arteriosus there is no history of cyanosis. However, it may appear when there is frank cardiac failure or a reversal of blood flow in the ductus.[60] Clubbing is never present in an uncomplicated patent ductus.

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* This is the second of a series of four articles on this subject. The first appeared in the May 1957 issue of the MEDICAL ANNALS.

The pulses are usually noticeably full and the pulse pressure widened. The characteristic "machinery" murmur has usually developed by this age, although instances in which a systolic murmur only is heard have been reported.[9] Unless the child is routinely exercised, the murmur of a small patent ductus may be missed. It is loudest in the second left intercostal space and may be transmitted to the left axilla, the back and into the neck. A thrill may or may not be felt. A diastolic murmur at the apex, resembling the mid-diastolic murmur of active rheumatic carditis, is not infrequently heard. It is probably a result of relative dilatation of the left ventricle and does not indicate an associated lesion. The diagnosis of uncomplicated patent ductus is one of the easiest in pediatric cardiology, but the exclusion of an associated lesion is not only rather difficult at times but of crucial importance.

The electrocardiogram is normal or shows a mild left ventricular preponderance in an uncomplicated case. Fluoroscopic examination may demonstrate an enlarged pulsating pulmonary artery, some increased vascularity of the lung fields, and some enlargement of the left ventricle. With a barium-filled esophagus in the left anterior oblique and lateral positions, left auricular enlargement may be seen.[59] It is surprising, however, how many of these children have a heart the size of which on fluoroscopic examination is within the limits of normal. Catheterization is indicated under the following conditions only: (1) when a systolic murmur unaccompanied by a diastolic component is present and the necessity arises for differentiation between a small ductus, a small septal defect communicating with the outflow tract of the right ventricle, and mild isolated pulmonic stenosis; (2) if an associated lesion is suspected; (3) when significant pulmonary hypertension has developed; and (4) rarely if a venous hum is heard which can not with certainty be differentiated from a patent ductus. It is well to bear in mind that catheterization of a patent ductus is only successful in 70 per cent of cases in experienced hands,[61] but a strong suggestion for its presence may be given by the finding of an increase in the oxygen saturation of the left pulmonary artery.[62] Retrograde aortography may be helpful in atypical cases. It should be emphasized, however, that the diagnosis of a patent ductus is usually made entirely on the basis of the physical examination.[63]

A study of patent ductus arteriosus in adults reveals that a proportion of these patients develop pulmonary hypertension although not all of them.[63, 64] This may also be present in children. Although it is clear that increased pulmonary blood flow may produce changes in the pulmonary vascular bed,[65] it is equally clear that other factors must be involved, since it is not an invariable sequence. The most advanced changes in the pulmonary arterioles can be seen in cases in which there is no arteriovenous shunt, that is, primary pulmonary hypertension, or in those in which the shunt is obviously of little significance.

All children with a patent ductus should have it ligated and divided. The ideal time for surgery is probably at the age of 5 or 6 years, shortly before the child enters school. At this time the child is old enough to understand in simple terms the procedures which he is to undergo and yet not so old that he has enough insight to be unduly alarmed. It should be made clear to the parents that there is some risk, as there is with any surgical procedure, but that it is minimal. Associated lesions and the presence of pulmonary hypertension are more serious problems. If pulmonary stenosis is associated with a ductus the two lesions should be corrected simultaneously. The obstruction produced by the stenosis should first be corrected and then the ductus ligated and divided. The presence of a ventricular septal defect is not a contraindication to the ligation of a ductus but strengthens its indication. Whether the ventricular septal defect should be closed simultaneously is a decision which should be carefully weighed in every case. The presence of pulmonary hypertension secondary to a large shunt is not a contraindication to surgery unless cyanosis has developed. Even advanced pulmonary changes secondary to mitral stenosis appear to be reversible,[66] and there is reason to believe that such a reverse would occur more readily in the lungs of a child. Cases have been reported in which the ductus has been ligated in the presence of a very high pulmonary artery pressure, and these children have done well.[9] It should be made clear that the risk of operation in these cases is greater.

### COARCTATION OF THE AORTA OF THE POSTDUCTAL OR ADULT TYPE

Coarctation of the aorta is a stricture of the aorta which usually occurs at, or just distal to the ductus arteriosus. It is more common in boys. Preductal coarctation has been discussed in Part I of this paper. There are many anatomic variations,[67] and the site may be in the abdominal aorta.[68] This lesion may go undetected for a number of years and even up to adult life. If it is extreme it is usually discovered in infancy, because the baby develops left ventricular failure. It may be necessary to operate during this period, although these children usually survive with adequate and vigorous medical therapy.[20, 21]

The history may include a complaint of excessive coldness and cramps of the lower extremities, the legs "going to sleep" readily. Easy fatigability, headaches and epistaxis are occasional symptoms during the first decade.[69] There is never cyanosis nor clubbing in the uncomplicated case.[70] It is our experience that children with coarctation are unusually alert and intelligent.

On physical examination a rather prominent pulsation in the jugular notch may be found.[71] Murmurs are variable and may not be present at all. A systolic murmur, along the left sternal border, which is very well heard over the back, is found in the majority of cases. A mid-diastolic murmur may be present at the apex due to left ventricular enlargement. Quite often a high-pitched systolic murmur will be heard at the apex which resembles the murmur of rheumatic heart disease with mitral insufficiency. Congenital mitral stenosis and a bicuspid aortic valve may be found as associated lesions; the murmur of mitral stenosis associated with coarctation is quite distinct from a functional mid-diastolic murmur and has a true presystolic accentuation. The radial pulses are full and the femoral pulses faint or not palpable. The blood pressure is elevated in the arms and low in the legs. In mild forms of coarctation the difference in pressure between the upper and lower extremities may be very slight. It is important to take the blood pressure in the legs after taking the pressure in the arms without unduly disturbing the child. The pressure differences between the arms and the legs in children are much less than those in adults. A difference of more than 30 mm. between the arms suggests that the left subclavian artery is involved in the coarctation.[68] The signs of collateral circulation, so prominent in adults, are usually not striking in children.

The electrocardiogram may be normal or show left ventricular preponderance. X-ray examination may demonstrate enlargement of the left ventricle in both the anteroposterior and the left anterior oblique positions. The notching of the under surfaces of the ribs, often prominent in adults, is not striking in children. Special studies are not usually necessary unless there is some question about the site and anatomy of the coarctation, in which case a retrograde aortogram may be of distinct help.[70] No case should be missed if one routinely palpates the femoral arteries and takes the blood pressure in the arms and legs.

This lesion presents no problems in differential diagnosis. Rarely infants with preductal coarctation may survive to school age, and if there is a question about this point the feet should always be examined for clubbing and cyanosis. The exclusion of an associated lesion may be difficult.

In most congenital cardiac malformations the child will restrict his own activities and should be allowed to do so. In coarctation, however, in which rupture proximal to the site of the coarctation may occur with strenuous exercise, the activity should be limited.[72]

Nine or 10 years is the optimum age for operation. The procedure is resection of the constricted segment and end-to-end anastomosis of the aorta. In experienced hands an operative mortality of 2 per cent has been achieved.[73]

### Aortic and Subaortic Stenosis

The subject of aortic stenosis has been covered in Part I of this paper. It is sufficient to reiterate that every effort should be made to carry these children from infancy to an age when open correction with a supravalvular approach is feasible. If, however, a preschool child with either of these lesions is having frequent fainting spells, operation should be carried out without delay since these children have a tendency to die suddenly.

### Auricular Septal Defect

Defects most frequently involve the septum secundum, but they may occur anywhere in the auricular septum. A persistent ostium primum, which lies at the base of the auricular septum, is less common and when present is usually associated with a deformity of the atrioventricular valve. A sinus venosus defect may occur high in the septum above the foramen ovale and within the orifice of the superior vena cava.[74] Anomalous pulmonary venous drainage is frequently associated with this type of defect.

These children may be retarded in growth and development and have frequent respiratory infections.[23] However, they may be surprisingly well developed when they reach school age. Easy fatigability and breathlessness on exertion are occasional symptoms. Rarely there is a history of transient episodes of cyanosis and right-sided congestive failure. Clubbing is not present.

On physical examination the cardiac impulse is characteristically heaving and there may be a precordial bulge.[75] A thrill is sometimes palpable, and inspection of the neck veins may reveal an elevated venous pressure.[76] Increase in the intensity of the second heart sound, which is widely split, is usually perceptible. A systolic murmur of moderate intensity is heard along the left sternal border and is well transmitted to the back. A diastolic murmur of pulmonic insufficiency may be present, and a mid-diastolic rumble at the apex is often heard. The blood pressure is normal.

The electrocardiogram shows right ventricular preponderance and often right bundle-branch block. On fluoroscopic examination the heart is seen to be enlarged with a prominent pulmonary artery and increased vascularity of the lung fields. Angiocardiographic examination is not ordinarily done. Cardiac catheterization, which shows a step-up in the oxygen saturation of the right auricle, should be performed in order to estimate the magnitude of the shunt so that operative closure of the defect can be accomplished before serious congestive failure develops.[77] It is often possible to demonstrate the defect by passing the catheter through it into the left auricle.

The differential diagnosis includes a patent foramen primum, atrioventricularis communis, anomalies of the pulmonary venous return, and ventricular septal defect with or without overriding of the aorta. From a practical standpoint it is of crucial importance to differentiate those lesions which require open cardiac surgery from an auricular septal defect. The characteristic electrocardiogram of an atrioventricularis communis will usually, although not invariably, distinguish this lesion. A patent foramen primum unassociated with an atrioventricular valve defect, however, can not be distinguished electrocardiographically.[78] Only careful analysis of catheterization data with the selection of a number of samples from different sites and in some cases selective angiocardiography will distinguish these anomalies, particularly auricular septal defects, from the combination of auricular and ventricular septal defects.

Surgical correction should be performed, preferably at the age of 5 or 6 years, although it is not necessary to restrict the activities of these children prior to operation. Several methods for the closure of auricular septal defects have been devised.[79-82] The choice of operation depends upon the location and size. Defects along the posterior margin of the septum are particularly amenable to external suture methods.[77] An open procedure with the use of hypothermia[82] may be used or the well technic described by Gross.[79] It should be emphasized that these patients should not be subjected to operation without the most careful preoperative studies and unless they are in experienced hands. Mitral stenosis in association with an auricular septal defect, Lutembacher's syndrome, is a rare lesion.[83] It is also of interest that the right bundle-branch block may disappear almost immediately after the defect is closed surgically.[84]

## ATRIOVENTRICULARIS COMMUNIS

An atrioventricularis communis is a communication between all 4 chambers of the heart due to an arrest in the development of the anterior and posterior endocardial cushions.[85]

There is frequently a history of congestive failure early in life, and these children often die in infancy. The association of this lesion with mongolism is well known.[23] Transient episodes of cyanosis may occur, although severe cyanosis does not develop in these children until pulmonary hypertension progresses.

On physical examination the pulses may be noticeably reduced in volume, with an accentuated pulmonic second sound and a soft systolic murmur. There may be in addition a systolic murmur at the apex transmitted to the axilla and accompanied by a thrill. This is indistinguishable from the murmur of mitral insufficiency. When present it is probably produced by a cleft in the anterior cusp of the mitral valve produced by the failure of the left tubercle of the anterior endocardial cushion to fuse with the parietal primordium of the cusp. (It should be noted that the remainder of the endocardial cushions form both the posterior cusp of the mitral valve and the septal cusp of the tricuspid valve.)

The electrocardiogram is usually but not invariably characteristic with left axis deviation in the standard leads and right ventricular preponderance in the precordial leads, regardless of whether the signs of mitral insufficiency are present. An electrocardiogram which may be indistinguishable from an atrioventricularis communis may sometimes be seen in certain forms of single ventricle. X-ray films show a somewhat narrow great vessel shadow at the base similar to that seen in transposition of the great vessels. A generally enlarged heart with a prominent pulmonary artery shadow is usually seen. The findings in the lung fields vary with the degree of pulmonary hypertension present. There may be pronounced vascularity of the lungs including an excessive shunt, but if extreme pulmonary hypertension is present the vascularity may not be striking. Evidence of a shunt at both auricular and ventricular levels and an increase in pulmonary artery pressure are obtained at catheterization studies.

An atrioventricularis communis should be closed with the use of an oxygenator. No attempt should be made to suture a defect under the posterior endocardial cushion because of the possibility of interfering with the conduction system. Defects at this site are usually small. Possibly a piece of Ivalon sponge of the shape of a collar button might be pushed through such a defect into the left ventricle and anchored on the right side a safe distance from the crest of the ventricular septum where the bundle of His courses. An obvious cleft in the anterior cusp of the mitral valve should be repaired.

### PURE PULMONIC STENOSIS

Pure pulmonic stenosis or isolated valvular pulmonic stenosis without a ventricular septal defect is characterized by pulmonary valvular stenosis of varying degree with or without an auricular septal defect. Stenosis of the infundibulum as an isolated defect is rather rare. Both valvular and infundibular stenosis may coëxist, the recognition of which is most important in the proper surgical management of these cases.[86]

Children with this lesion usually survive to school age, but occasionally it is a problem in infancy of sufficient gravity to warrant surgical intervention. There may be a history of spells in infancy similar to those which occur in a tetralogy. These attacks of loss of consciousness are of grave omen and may presage sudden death, which is not uncommon in severe forms of pulmonary stenosis.[87] These children are not cyanotic if no auricular septal defect is present.[88, 89] Squatting is unusual unless cyanosis is present, and then it occurs less commonly than in tetralogy of Fallot. Anginal attacks have been described as a symptom of pulmonic stenosis.[90]

Depending on the severity of the lesion, these children may present themselves with little or no history of disability, with no cyanosis or clubbing, and a reduced second heart sound with a harsh systolic murmur and thrill. In contrast, these patients may be extremely cyanotic, markedly disabled, have little or no second sound, weak peripheral pulses due to reduced cardiac output, and a harsh systolic murmur and thrill. Some workers have commented on the characteristic murmur of pulmonic stenosis and the fact that it seems to extend beyond the second sound.[91, 92] It is always a long, harsh systolic murmur transmitted to the back and lung bases, although it may also be transmitted to the neck and be almost indistinguishable from the murmur of aortic stenosis. One differentiating feature may be that the murmur of aortic stenosis is transmitted to the right side of the neck, while that of pulmonic stenosis is transmitted to the left side of the neck.[93] The senior author has not seen isolated pulmonic stenosis without a well-defined, obviously organic murmur.

The electrocardiogram shows marked right ventricular preponderance, and the P waves in lead II, in particular, may show very high voltage, at times resembling a QRS complex. Prolongation of the P-R interval and sharply inverted T waves in the chest leads from $V_1$ to $V_4$ usually indicate a severe degree of stenosis.[89] On X-ray or fluoroscopic examination the heart may be seen to be enlarged and, in contrast to a tetralogy, the pulmonary conus is convex and full, although rather quiet. Transmitted pulsations from an active right ventricle may be seen. In the left anterior oblique position the right ventricle may be quite prominent and rounded. The vascularity of the lung fields is decreased. In the typical case angiocardiographic and catheterization studies are not necessary. These procedures, however, may be helpful in differentiating the following: the mild form of this lesion from a small ductus with a systolic murmur or a high small ventricular septal defect, and the severe form from extreme tetralogy of Fallot or transposition of the great vessels with pulmonic stenosis. To distinguish these lesions is most important, since the operative approach differs in each instance. Angiocardiography reveals gross dilatation of the pulmonary arteries distal to the point of stenosis, the peripheral branches being normal or reduced in size.[94] The contrast medium may remain a long time in the pulmonary artery even after it has ceased to opacify the heart. A low pulmonary artery pressure and an elevated right ventricular pressure are found on cardiac catheterization.

Children with pure pulmonic stenosis of moderate or severe degree should have surgical correction before gross cardiac damage supervenes. Pulmonary valvulotomy introduced by Brock[95] is the method of choice at the present time. By the use of hypothermia and complete cessation of inflow to the heart, a transarterial approach under direct vision has been accomplished,[82] but Brock's method is preferable. A radical valvulotomy may lead to acute pulmonary valvular insufficiency and failure. Pulmonic insufficiency does not develop subsequent to the Brock procedure. Resection of the infundibulum,[96] when the stenosis occurs at this site, is essential. The operative results of pulmonary valvulotomy for the relief of isolated pulmonic stenosis have recently been summarized.[97, 98]

## TETRALOGY OF FALLOT

The tetralogy of Fallot is a combination of lesions originally described by Steno,[99] characterized by infundibular or valvular pulmonic stenosis, overriding of the aorta with a ventricular septal defect, and right ventricular hypertrophy. The lesion varies from extreme pulmonic stenosis with rather marked overriding of the aorta to a very mild, hardly perceptible stenosis with a large ventricular septal defect in which the shunt may actually be from left to right. By some this is classified as a separate syndrome of ventricular septal defect with pulmonic stenosis. The history may vary all the way from that of an infant frequently preferring the knee-chest and later the squatting position when fatigued, sometimes with an actual convulsion, to that of a child without a history of serious difficulties but with cyanosis and limitation of exercise tolerance. Squatting is a very constant feature and, although many attempts have been made to explain the relief children experience in this position, none is entirely satisfactory. These children may die in the course of one of their anoxemic attacks, but they do not usually go into failure. One must see a number of these children to appreciate the wide range of symptoms which they may have.

Physical examination reveals a child who is underweight and with cyanosis which is accentuated by crying. The second sound is usually somewhat decreased in intensity, although it may be normal. A harsh, rasping, long systolic murmur along the left sternal border, well transmitted to the back and accompanied by a thrill, is usually found. When no murmur at all is heard one must always bear in mind the possibility of complete or almost complete pulmonary valve atresia. Clubbing may be minimal, or the ends of the fingers may be as large as quarters. The blood pressure is often rather difficult to obtain. These children tend to be a little dull mentally, probably because they have been sheltered and protected, and they are frequently very "spoiled."

The electrocardiogram shows evidence of right ventricular hypertrophy. On fluoroscopic examination the heart is usually not seen to be enlarged. The apex may be elevated, and there is convexity in the region of the pulmonary conus, with some enlargement of the right ventricle in the left anterior oblique position. It is surprising, however, how much enlargement of this chamber may be present with minimal evidence of enlargement on fluoroscopic examination. The vascularity of the lung fields is decreased, although in older children this may not be so obvious because of the development of collateral circulation. About 20 per cent of patients with tetralogy of Fallot have a right aortic arch, as shown on the esophogram. Angiocardiographic and catheterization studies are not usually necessary.

It is of the most crucial importance to differentiate tetralogy of Fallot from valvular pulmonic stenosis with or without an auricular septal defect and from transposition of the great vessels with pulmonic stenosis or extreme dextroposition of the aorta and pulmonic stenosis, since all 3 require different surgical approaches. Frequently only the most careful analysis of all the available data will make this diagnosis apparent. In valvular pulmonic stenosis a valvulotomy should be done, and in transposition of the great vessels or extreme dextroposition of the aorta an auricular septal defect should be created in addition to an anastomosis; and sometimes this should be the only procedure.

For those who had for years cared for children with heart disease, so often laboring under the necessity of giving a hopeless prognosis to parents, it was a great day when the careful observation of a solitary worker resulted in the well-known anastomosis of the left subclavian artery to the pulmonary artery in the treatment of tetralogy of Fallot.[40] The results of this procedure have been currently summarized.[100] Recently complete correction of this defect has been accomplished with the use of open cardiac surgery.[101, 102] At the time of this writing the Blalock-Taussig anastomosis is still the procedure of choice in the child with tetralogy of Fallot with marked disability. Such children will, in the not too distant future, be candidates for complete correction of their lesion and at that time the artificial ductus may be very easily closed.

## TRICUSPID ATRESIA

Tricuspid atresia is characterized by atresia of the tricuspid valve, a rudimentary right ventricle, an auricular septal defect, and varying degrees of pulmonic stenosis or narrowing of the communication between the left and right ventricles.

The history is in every respect similar to that in the tetralogy of Fallot.

The liver may be both enlarged and pulsating, depending on the size of the auricular septal defect. A palpable thrust at the apex may be present.[103] A systolic murmur with maximal intensity over the base of the heart is usually present. The second sound may be normal or diminished.

The electrocardiogram shows left axis deviation in the standard leads and left ventricular preponderance in the precordial leads in typical cases. A characteristic pattern, consisting of broad P waves and a short P-R interval, broad QRS complexes and absent Q waves, seen in the left precordial leads, has been described.[104] The X-ray or fluoroscopic examination may show a rather characteristic contour with flattening of the anterior border in the left anterior oblique view. A *coeur en sabot* configuration is frequently seen.[105] A striking radiologic feature may be the appearance of a square-shaped heart.[106] In the anteroposterior and left anterior oblique views a concavity of the right border of the heart may sometimes be seen.[105] The pulmonary vascular markings are diminished.

This is one lesion in which an angiocardiogram in the left anterior oblique position may be of distinct value, if the clinical, electrocardiographic and X-ray findings are not characteristic. The typical case demonstrates the contrast medium flowing from the right auricle to the left auricle and into the left ventricle, filling the aorta promptly. The left ventricle appears as a round ball in the left anterior oblique position.[107] Cardiac catheterization will also reveal the defect. These studies demonstrate the inability of the catheter to enter the right ventricle but relative ease of entry into the left auricle and the left ventricle, with oxygen unsaturation of the left auricle.[108]

This lesion must be differentiated from a single ventricle with pulmonic stenosis and occasionally from tetralogy of Fallot, since the characteristic electrocardiographic changes are not invariably present, and since a tetralogy of Fallot may rarely show left axis deviation. In the rare situation in which there is tricuspid atresia with transposition of the great vessels, the clinical findings very closely resemble those found in uncomplicated aortic stenosis.

The operation of choice for this lesion will, for some time, be a Blalock-Taussig anastomosis.

## SINGLE VENTRICLE WITH PULMONIC STENOSIS

A single ventricle occurs when there is failure of the ventricular septum to develop, the remnants of the bulbus cordis forming a rudimentary outlet chamber.

When this anomaly is associated with pulmonic stenosis it very closely resembles tricuspid atresia. The similarity of the clinical features also makes it difficult to distinguish from tetralogy of Fallot.[22] A single ventricle with transposition will be discussed in a later paper.

Except for the signs of right ventricular hypertrophy the electrocardiogram shows no uniform pattern. The standard leads may show right or left axis deviation. There may be some enlargement of the left ventricle with diminished pulmonary markings noted on fluoroscopic examination. Cardiac catheterization studies are helpful.

These children should be treated with a Blalock-Taussig anastomosis. Satisfactory total correction of any form of single ventricle probably lies in the very distant future. The results obtained depend entirely on the relative pressures in the aorta and pulmonary arteries, which in turn depend on the anatomy of the rudimentary outflow tract or persistent bulbus cordis of the single ventricle.

### VENTRICULAR SEPTAL DEFECTS

A ventricular septal defect is a communication between the right and left ventricles. In the left ventricle it is usually seen below the right coronary cusp of the aorta; in the right ventricle it may communicate with the inflow tract directly beneath the septal cusp of the tricuspid valve or at the angle between the septal and anterior cusps. Less commonly it enters the outflow tract of the right ventricle; it may also be low in the muscular septum, and rarely it is between the left ventricle and right auricle, either directly or through a defect in the septal cusp of the tricuspid valve.

When there has been almost complete failure of the endocardial cushions to fuse with the ventricular septum and there is a defect of the right bulbar ridge, a larger, more serious defect results with both anatomic and functional overriding of the aorta (Eisenmenger complex). Most ventricular septal defects may be entered quite readily from the right ventricle, but an actual, significant right to left shunt of blood during systole probably does not occur unless the aorta is dextroposed.

There may be a history of episodes of pneumonia in infancy which are actually combinations of infection and failure. Unless there is severe pulmonary hypertension there is no cyanosis. Clubbing is not present. The picture may range from a child with a small defect who is entirely asymptomatic to one with a large defect with a marked shunt, evidence of pulmonary hypertension, and limitation of exercise tolerance and fatigability.

On physical examination only a rather long, harsh, systolic murmur may be found which does not extend clear to, or beyond the second sound as does the murmur of pulmonic stenosis. It is harsher than the murmur of an auricular septal defect and is not well transmitted to the back unless the defect communicates with the outflow tract of the right ventricle. A small ventricular septal defect of this type is very difficult to differentiate from a mild pulmonic stenosis since the smaller the defect the harsher and shriller the murmur. A thrill may or may not be present. The murmur is usually well heard on the right but is not transmitted to the neck. If the defect is in the muscular septum it may be shortened by closure of the ventricular septum during systole. The second sound is either normal or accentuated; the pulses are normal or may be a little full. If pulmonary hypertension is present the second sound is markedly accentuated, and even at a very early age obvious cardiac enlargement and a precordial bulge may be present.

The electrocardiogram in an uncomplicated ventricular septal defect shows chiefly left ventricular preponderance. A small auricular septal defect frequently accompanies a ventricular septal defect, however, and some evidence of right ventricular hypertrophy is usually present. If there is overriding of the aorta which is functionally significant there is right ventricular preponderance.

Fluoroscopic examination shows a heart which may be normal in size or show right or left ventricular enlargement or both. The pulmonary artery may be somewhat prominent and pulsating, with increased vascularity of the lung fields.

Angiocardiography is not usually done except in very experienced hands. Catheterization studies of the most careful nature should be done. The presence of a significant step-up in oxygen saturation in the right ventricle of 2 vol. per cent is rather good evidence that a defect is present, although a low auricular septal defect and a patent ductus arteriosus with pulmonary insufficiency may cause confusion. If no step-up is found, a ventricular septal defect may still be present, since the tip of the catheter may have missed the jet from the left ventricle or sufficient pulmonary hypertension may have developed so that a significant shunt is no longer present. A pressure gradient between the right ventricle and the pulmonary artery suggesting pulmonic stenosis may be present in both an auricular and ventricular septal defect without an anatomic pulmonic stenosis.

The management of these children requires the careful evaluation of all factors in each case. In a preliminary review of the literature of the nineteenth century and first 40 years of the twentieth, 118 autopsied cases of ventricular septal defects were found, ranging in age from newborn to 79 years. In the majority of these cases the defect was an incidental finding, death resulting from other causes.[109] In infancy, however, a ventricular septal defect may cause death. Those who do not respond to medical management are best treated in our present state of knowledge with a pulmonary tuck procedure as detailed in the preceding paper. Children of preschool age must be carefully observed. If the heart is enlarging and the pulmonary artery pressure increasing, a tuck procedure will be of no benefit, and open cardiac surgery must be considered at an early date. These children should receive the most careful pediatric care prior to surgery and achieve a state of optimal health.

It is important to recognize the occasional child whose primary lesion is pulmonary hypertension and in whom the ventricular septal defect is secondary and actually beneficial as a "blow-off." Closure of the defect is obviously not indicated in these cases.

The school-aged child with an asymptomatic lesion should not have his defect closed until technics of open surgery are more highly perfected. He should be carefully supervised from a pediatric standpoint with especial attention to the prophylaxis of subacute bacterial endocarditis. The subject of ventricular septal defects in adults will be covered in a subsequent paper.

The successful closure of a defect results in complete disappearance of the characteristic murmur. Persistence of an obviously organic murmur indicates that an associated uncorrected lesion is present.

## CONCLUSION

In no field of surgery has there been such remarkable progress as in that of operative procedures for the correction of congenital cardiac malformations in children. When confronted with a child with congenital heart disease, therefore, it behooves the physician to see that every effort is made to establish an accurate diagnosis.

Intelligent judgment in the careful selection of patients for operation is most important.[110] The determination of the optimum time for surgical intervention should take into account the age as well as the clinical status of the child. These children should be operated on only by experienced, well-trained surgeons in whose hands their chances for survival are the greatest.

## SUMMARY

Congenital malformations of the heart in the preschool and school-aged child which are amenable to surgical correction have been discussed. These include patent ductus arteriosus, coarctation of the aorta, aortic stenosis, auricular septal defect, atrioventricularis communis, pure pulmonic stenosis, tetralogy of Fallot, tricuspid atresia, single ventricle with pulmonic stenosis, ventricular septal defect, and Eisenmenger's complex.

The importance of establishing an accurate diagnosis before surgical intervention is contemplated has been emphasized. The careful selection of patients and the optimum timing for these procedures have been stressed.

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# President's Page

## REFLECTIONS OF A PROSPECTIVE IMMEDIATE PAST PRESIDENT

Inasmuch as I will soon progress to the status of Immediate Past President of the Society, it would seem that sufficient perspective has been gained to occasion some comment on the office after my year of tenure.

The position of President is a great honor associated with considerable responsibility. I am sure that there are many members of the Society who have the talents for the position, but few, probably, who have the time to devote to it in order to do the job as they feel it should be done. The latter is in a sense true in my own particular case.

The President is blessed by the fact that the Executive Board is relatively small, easily available for advice and consultation, and consists of men of great experience in Society affairs. Such being the case, it is somewhat difficult for the President and the Society to get into serious trouble.

The President also has the services of an excellent administrative staff under the direction of the Executive Director. This staff does a prodigious amount of work for the Society, to say the least, which is expected and accepted by the members and the community at large. Nevertheless, I think that this work is quite fully appreciated.

The Society's committees carry a great burden of the work, in some cases to a degree that makes their members seem almost dedicated to the Society's function. It is my hope that we can, in the near future, establish a system by which the sum of any member's committee work can be made available, and when this has reached an appropriate level, he or she be properly honored by the Society.

The Medical Society is highly respected in this community, and we must, by all means, cherish and maintain this respect. The problems will become more complex as time goes on. The membership must be eternally vigilant and prepare to meet these problems in an honest, straight-forward fashion.

Ralph M. Caulk

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# *Editorials*

## LOGIC AS APPLIED TO CASE RECORDS*

To all practitioners the opportunity of observation is given. Too small a proportion make use of it and too few men proceed to the stage of inference, deduction, and experiment. The most important application of logic to medicine is the development of an athletic alertness in the physician's thought processes.

Specific ability in applying the principles of logic is needed first in diagnosis and treatment. Then the physician needs to be able to set his ideas in order, formulate adequate case histories, and write a logical paper summarizing findings and outlining their application in practice. It is an advantage to be able to speak well and make an adequate platform appearance.

Case histories are documentations of our fact-finding, our observations and conclusions. They are the precipitate of our routine functioning. They are necessary for our education, and painstaking education is necessary for us if we are to prepare adequate histories. If we use our own available case histories as they should be used, we can expect to increase our efficiency to a marked degree. It is tragic that so much serviceable material gets so little practical use. The expense of recording, filing, and administering case histories is heavy. It is a serious economic waste that so much invested earthly substance

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* Editor's note: These excerpts from Dr. Laird's book, "The Philosophy of Medicine," are reproduced in the Medical Annals through the courtesy of the author and his publisher, Education Foundation, Inc., Charleston, W. Va.

*Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of District of Columbia.*

should be so unproductive. But not only does this neglect of histories constitute an economic waste; it is also a waste of professional opportunity.

For a generation our soundest thinkers have emphasized the need of making each item of experience a vantage point from which to proceed to a richer stage of experience. John Dewey, in a chapter in "Education for Democracy," states the principle superlatively well:

"Education is a constant re-organizing or reconstructing of experience. . . . All that is really learned at any and every stage of experience constitutes the value of that experience, and in the sense that is the chief business of life at every point to make this living contribute to an enrichment of its own perceptible meaning."

He continues by saying that training should be thought of not only as a preparation for some remote maturity, but also as direct and immediate preparation for the next forward step. In his own words, "Growing, or the continuous reconstruction of experience is the only end." This profound observation is true of all the stages of growth from infancy to extreme age.

It holds especially true in the practice of medicine. Rather unfortunately, we can sometimes easily conceal our failure to re-organize and reconstruct our experience. If we fail to apply to any given situation the wisdom that should have been gained from past experience, no one may be the wiser.

Just as the student considers the incident closed after he has finished the course, so we physicians after the surgery or therapy is ended may too often consider, "that is the end of that." Our records are likely to be sketchy. Even if they are accurate and complete, too often a member of our profession does not refer to them again. He does not enjoy the taking and recording of case histories, and even when a written summary is made it is done under protest. When there is no overt complaint, the dislike of the procedure is indicated by the obvious defects of the report.

After all, the record-taking process is not unduly difficult. The proper procedure is to analyze every unit of daily practice, record the results, and consult the record whenever a similar situation presents itself. If one has a good result, he should study the history to assure himself of what made the result a good one. If the result is poor, he should with equal zeal study the record to see wherein he failed, and to decide what precautions to take and what errors to avoid in doing better with the new situation.

The reconstruction of experience demands alertness, reflection, and careful reasoning. But it is doubly rewarding. It is not only enabling the protagonist to meet the new experience in a fashion more nearly adequate; it is helping him form the reconstructing habit. Each succeeding bit of reconstruction strengthens the habit, and after a reasonable amount of practice it becomes second nature. Many a loved and respected practitioner in our land is an ambulant example of this professional accomplishment.

On the other hand, if the reconstructive process is neglected a few times, the practitioner becomes less and less capable and at last may almost completely lose the re-organizing ability. Nothing can take the place of a consistent effort to make "living contribute to an enrichment of its own perceptible meaning."

Instead of careful analysis and synthesis of experience our extroverted age wants action. Any action, however lacking in forethought, seems to be more desirable than reflective thought. Possibly one of the sins committed by so-called higher education is the exaltation of a brief hour's victory on the football field over days of painstaking study in the library or experimentation in the laboratory.

The systematic handling and consulting of records tends to growth. One cannot go through a series of 100 records without realizing that he may not be quite so good as he thought he was. Such a study promotes humility which Saint Chrysostom declares to be the greatest of all virtues.

If a surgeon has done 9 Whipple operations for carcinoma of the head of the pancreas and he has had 7 fatalities and 2 cases with life prolonged for 9 months, should he not prepare most carefully for the tenth operation of this type? We would expect him to make a very careful study of the 9 records of preceding cases. If he accepts the tenth patient for operation without doing this, could one think of a practice more lacking in logic or integrity? Such practice is as gross a violation of ethics as of logic. Yet the punctilious study of records is far more honored in the breach than in the observance.

It is always important for us to know just where we stand. If we have made the proper use of experience, and have adopted a sensible philosophy of records, we shall know at the end of each month just what our mortality rate is, the morbidity rate, the incidence of various diseases.

We are somewhat lacking if we do not have these figures in our grasp at any moment. We are like men who are so thoughtless about their investment portfolios that they do not know the interest rate on their bank accounts, the dividend rates on the stocks and bonds, and the amount of the income tax.

No man would consult a second time an investment broker who had advised the buying of a security without being thoroughly familiar with its returns and its margin of safety. We cannot be considered thoughtful physicians unless we know all the data involved in our activities.

William R. Laird, M.D.

## ANESTHESIA FOR DIABETICS*

Much has been said about the role of anesthesiology in extending operability into conditions and areas which were previously untouchable, and also through physiologic control and support in enlarging the scope of previously difficult surgical procedures.

In broad terms the bad risk patient is one who has some limitation in the reserve in the various parts of the complex oxygenation mechanism. The degree of reduction in functional reserve determines the degree of risk. This reduction is commonly in circulation where the heart itself or the peripheral vessels or even the $O_2$-carrying power of the blood may be at fault. Or, it may be respiration, where more variably the deficiency may be in ventilation from central damage or depression, from obstruction, or from faulty respiratory mechanics; or the deficiency may be in alveolar function, either primary to the lung, as in emphysema or infection, or secondary to circulatory malfunction. Any or all of these defects tend to produce trouble quickly, usually during anesthesia.

There is a significant group of patients in whom the hazard is more remote and less obvious because it is in response to metabolic change. All diabetics should be included under this heading.

The most encouraging single fact about diabetes is that when it is under control ordinary surgery and anesthesia are hardly more risky than in nondiabetic patients of similar physical status. Indeed, the likelihood that more medical facts are available on the controlled diabetic than on the average patient actually makes his safety greater under most circumstances. Since abnormal metabolism is the potential risk, the usual concern for good oxygenation becomes the basic anesthetic requirement in these cases.

The real problem, then, is in management of the uncontrolled diabetic who must have surgery. The farther the deviation from control of sugar and fat metabolism, the more compelling must be the indications for surgery if it is to be deemed proper to do it under these adverse conditions. The rule should be that unless the surgical danger from waiting is greater than the improvement which could be made in the diabetes by a period of treatment, the prior effort to attain control would always be made.

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* Presented as part of a Symposium on Diabetes in the General Practice Session at Doctors Hospital, June 23, 1955.

If it is decided that surgery must be instituted at once, vigorous treatment of the diabetes in the effort to restore metabolic balance should be independently continued without interference by the concurrent surgery and anesthesia. The immediate support of circulation is largely volume control. The chemicals in intravenous solutions may be determined by the internist with reference to acidosis. Since excess sugar is less dangerous than excess insulin, efforts to balance the two during anesthesia should stress the need for some intravenous surplus of sugar. The attendant anesthesia should be as reversible as possible, and quick recovery from the anesthesia should be an objective. The importance of avoiding anoxia cannot be overemphasized. Many authorities have no fear of ether with plenty of oxygen; everyone should fear it by the open drop method with air only.

The same attention to detailed observation and immediate response to correct any deviation (as the diabetic himself has been taught) will make anesthesia for these patients relatively routine in most cases. For the very bad ones the combination of (1) minimum expeditious surgery, (2) anesthesia by reversible technics with constant care to correct at once any deviation from normal in any part of the oxygenation mechanism, respiratory or circulatory, and (3) uninterrupted effort by the internist to gain control of the diabetes will prove to be the triad upon which most success will rest.

D. S.

## A VACATION AS AN INVESTMENT

A brief definition of a vacation may be stated as a reprieve from labor. This definition would also fit a jail sentence. In the usual connotation it implies a change, a rest, or a pleasant diversion from the daily routine. It may mean many things to many men, an interlude that has become a habit and a part of American life to which most of us subscribe.

Opinions vary widely as to the necessity, variety, and cost of vacations, and the benefits they bestow. One may consider a sea voyage restful and invigorating, while another may associate it with nausea and boredom; but there are other aspects which are food for thought. To consider a vacation from the investment angle, the outlay in dollars must have some relation to the tangible or intangible return, a nebulous item at the best.

It is not unusual to meet an individual who almost boastingly informs us that he never takes a vacation, yet he appears healthy and happy. Victor Borge has said that he has not taken a vacation in seven years, but there is but one Victor Borge. There are executives in industry and large national organizations who apparently spend more time in Florida than in their offices. There seems to be no yardstick for universal application.

To confine the consideration to the doctor, it ls generally conceded that his work requires more than 40 hours each week; overtime and double time have no meaning. His type of profession is attended with pressure and anxiety, irregular habits in respect to food and rest, the aggregate of which dulls the faculties and takes a toll of the physical being, and, compounded year after year, is succeeded by deterioration. The wear and tear is retarded but never fully compensated by a vacation. So often the word "vacation" is a misnomer; it is merely a change in the place of business. Contact is maintained by mail and wire, so that there is only a change of scene. On the other hand, some vacationists attempt to encompass in two weeks or a month all the physical exercise that should be spread out over a year, only to return to their homes fagged out and ready for a rest.

Vacations should not be planned without considering the cost, and it can vary from the reasonable expense of a camp in Maine to the astronomical rates of some Miami hotel. The time a physician spends on vacation away from his practice is a financial loss to some extent, no matter how well an associate or assistant may attempt to replace him.

Even so, a vacation is a good investment.

C. S. W.

## VNA SERVICES FOR THE HOME PATIENT

Did you ever wish you had a graduate registered nurse who would help you in a patient's home on a part-time basis? Many of you know you can have this help by calling the Visiting Nurse Association. In 1956, 853 more calls than in the preceding year came to this organization directly from the hospitals to make sure patients would have the additional nursing care and instruction they needed to continue their recovery at home.

A third physical therapist has been added to the staff as more patients are being referred by physicians for an early start in physical therapy before the patient is able to go to a doctor's office or center. Also, patients can be discharged from hospitals because physical therapy may be continued at home and the patient guided in self-help and toward community facilities for rehabilitation.

Adjusting to a new routine and changing food habits is usually difficult and especially so for the patient with diabetes. It may take longer than one expects for the patient to really learn how to manage. Often a few visits to the home help a person to accept the fact that he has diabetes and to plan how he will manage to take the insulin and keep within the limits of the diet prescribed by the physician. The visiting nurse because of her presence in the home is able to sense the attitude of other members of the family and bring them into the whole learning process, which is so necessary for continued progress. When indicated, the visiting nurse teaches a member of the family or a neighbor to give the hypodermic injection. The patient may need help with personal hygiene, the care of the skin, and perhaps help in planning more family recreation. The better the patient and his family are oriented to living with diabetes, the greater is the assurance that the patient will continue under the care of his doctor. For the diabetic, group teaching is often an effective and economical way for continuing with the educational process. The visiting nurse can arrange to meet with a diabetic group under the care of a physician and plan with him to cover the facts he wants to be sure they understand. It is well known that group discussion helps members to get rid of frustrations, to accept limitations, and to plan constructively for a continued fruitful life.

Visiting nurses can be equally helpful to the physician in continuing with instruction to the colostomy patient when he is discharged from the hospital. The patient himself may feel fairly secure in performing treatments he has learned while in the hospital, with skillful assistance within call. He may even hesitate to voice his fears to the physician after he returns home. This increasing awareness on the part of the physician of the patient's concern when he has experienced radical surgery has resulted in calls to the Visiting Nurse Association, an organization whose aim is to assist the physician in the care of the patient and to teach patients and families to manage by themselves. When further community resources are needed, the visiting nurse, already accepted by the family, is able to guide them toward the proper facility.

The public health nurse mental health consultant, who has been with the Visiting Nurse Association almost 5 years, is being called upon in an increasing number of cases to assist with the emotional problems which sometimes complicate other illnesses. She also supervises the nursing staff in the follow-up care of psychiatric patients as desired by the private psychiatrist or by the psychiatrist in charge of a clinic. The visiting nurse is sometimes the one able to help the family or the patient accept psychiatric care. The psychiatric patients referred to the Visiting Nurse Association have tripled during the past year.

The visiting nurse cares for all types of illnesses. With the support of the American Cancer Society, in addition to professional nursing care, practical nurse care up to 4 hours is provided as needed in consultation with the physician.

It is always expected that every patient able to do so will pay the cost of a visit—about $3.25. For those unable to pay the full cost, adjustments are made. This is made possible because of gifts from individuals and a large allocation from the United Givers Fund. A contract with the Health Department provides the same quality of visiting nurse service for patients receiving public assistance.

The 1957 Annual Report has been forwarded to all members of the D. C. Medical Society. The Visiting Nurse Association welcomes the opportunity to assist physicians in every way possible in the care of patients at home.

CLARISSA GIBSON, R.N.
*Executive Director,*
*Visiting Nurse Association*

## PROCEEDINGS OF THE ANNUAL BUSINESS MEETING

Dr. Ralph M. Caulk, President of the Medical Society of the District of Columbia, presided at the Society's Annual Business Meeting, May 1. The Society voted to approve without reading the "Annual Reports of Officers, the Executive Board, and the Board of Censors for 1956–1957," a copy of which had been mailed to each voting member of the Society prior to the meeting. The "Supplementary Report of the Executive Board," which is published in this issue following the Proceedings, was presented to the Society by the Chairman of the Executive Board, Dr. Wallace M. Yater. The Society approved the report with the exception of Amendment XXXV, which was deleted in its entirety and will be presented in a slightly different form at a later date. The report was then adopted as amended.

Dr. Caulk reported the deaths of 19 members during the past year, and the members present stood for a moment in silent tribute to the deceased. Deceased members were: Drs. Robert W. Baker, Samuel Benjamin, Arthur A. Christie, Cyrus W. Culver, Marvin A. Custis, Samuel Fishman, Carl Henning, Valentine M. Hess, R. Arthur Hooe, LeRoy W. Hyde, Lee Jarvis, John R. Lloyd, Francis S. Machen, William J. Mallory, Lyle M. Mason, Henry A. Polkinhorn, John C. Reisinger, J. Russell Verbrycke, Jr., and Leopold E. Wexberg.

### ANNUAL REPORT OF THE CHAIRMAN OF THE EXECUTIVE BOARD

In the annual report to the membership, Chairman Yater summarized the principal activities and actions of the Executive Board over the past year. Routine matters which occupy a great deal of the Board's time were not included in the report. In this category are supervision of the Society's finances, disposition of membership problems, and decisions with respect to administrative procedures.

"I am pleased with the accomplishments of the last year," Dr. Yater said, "fully realizing that where problems have been solved, larger ones have been raised. These will challenge the best leadership we have and test the strength and unity of our organization. I am confident that we will not fall short of the demands made upon us."

The Chairman presented to the Society for permanent membership 84 Active, 31 Associate, 1 Affilate, and 5 Resident-Intern members who had been elected previously for a probationary period of 1 year.

Dr. Yater, whose services as Chairman of the Board will close on July 1, 1957, expressed his personal appreciation to the members of the Society who have, as he expressed it, "been most considerate and helpful to me in the performance of my duties." He especially expressed his gratitude to his colleagues on the Board for their coöperation and many kindnesses.

### ELECTION OF OFFICERS

Dr. Frank D. Costenbader, Chairman of the Nominating Committee, was recognized by the Chairman and gave a supplementary report, in which he stated that, due to illness, Dr. Aubrey D. Fischer, nominated for First Vice President, had found it necessary to withdraw. The Committee had then met and they unanimously nominated Dr. Duane C. Richtmeyer for First Vice President.

Dr. Caulk presented to the Society for election the nominees for office which had been presented to the Society at the Business Meeting, March 7. The officers were unanimously elected. They are:

President-elect: Dr. W. LeRoy Dunn
First Vice President: Dr. Duane C. Richtmeyer
Second Vice President: Dr. Dorothy B. Holmes
Member of the Executive Board: Dr. Ralph M. Caulk
Member of the Board of Censors: Dr. W. Robert Perkins, Jr.
Delegate to the American Medical Association: Dr. Victor R. Alfaro
Alternate Delegate to the AMA: Dr. Edward W. Nicklas

Dr. James W. Watts, President-elect during 1956–57, will take office as President of the Society, July 1, 1957. Dr. Dunn will become President on July 1, 1958. With the exception of the delegates to the American Medical Association, officers begin their term of office on July 1, 1957. Dr. Caulk will serve for 4 years on the Executive Board and Dr. Perkins for 3 years on the Board of Censors. The Delegates to the AMA, Drs. Alfaro and Nicklas, will serve for a 2-year period beginning January 1, 1958.

In view of his election to the office of President-elect, Dr. Dunn resigned from the Board of Censors. Dr. O. Hugh Fulcher was elected to fill the vacancy caused by the withdrawal of Dr. Dunn and will complete his term of office, which expires in 1959.

Following the election of officers, the new President-elect, Dr. Dunn, was escorted to the platform. Dr. Dunn expressed his appreciation of the honor conferred upon him and said he would accept and carry out to the best of his ability the responsibilities and duties that go with the office of President.

Dr. Caulk announced that last year's President, Dr. William Ross Morris, had presented certificates of appreciation to all the living past presidents and, therefore, he felt that this was an appropriate time to confer a similar certificate upon Dr. Morris in appreciation of "his loyal and valued services as President of the Medical Society of the District of Columbia for the year 1955–56."

CITATION TO PAST PRESIDENT MORRIS

DR. W. ROSS MORRIS (right) accepts certificate of appreciation conferred upon Past Presidents from PRESIDENT CAULK at the Medical Society's Annual Business Meeting.

Dr. Caulk then relinquished the chair to Dr. Yater, who presented a gavel to the retiring President, with the statement that it symbolized "a token of the grateful appreciation of the Society." Dr. Caulk responded by stating his own appreciation of the coöperation of the members of the Executive Board and the chairmen of the many committees and sections of the Society, and for the loyal efforts of the administrative staff headed by that "stalwart administrator and secretary, Mr. Wiprud."

PRESIDENT CAULK ACCEPTS GAVEL FROM DR. YATER

Dr. Ralph M. Caulk (right), retiring President of the District Medical Society, accepts the gavel as a symbol of the office he is relinquishing from Dr. Wallace M. Yater, Chairman of the Society's Executive Board, at the Annual Business Meeting.

### Presentation of Citations

At the close of the Business Meeting, Major General Melvin J. Maas, Chairman of the President's Committee on Employment of the Physically Handicapped, was called upon to present Citations for Meritorious Service to Drs. Josephine J. Buchanan, Paul B. Cornely, and Charles D. Shields. Citations were conferred upon these three prominent physicians upon the recommendation of the District of Columbia Medical Society and the District's Committee on Employment of the Physically Handicapped in recognition of their outstanding efforts in promoting the employment of the physically handicapped in the Washington area.

Dr. Buchanan is well known to the Medical Society through her work at the District of Columbia General Hospital, where she is Chief of the Physical Medicine and Rehabilitation Department. Dr. Cornely, as Medical Director of Freedmen's Hospital and Professor of Preventive Medicine and Public Health, Howard University School of Medicine, and Dr. Shields, who is Associate Dean of Georgetown University School of Medicine and Director of its Department of Physical Medicine and Rehabilitation, have likewise made outstanding contributions in this field.

The final item on the program was the showing of a documentary color film produced by the American Medical Association, entitled, "The Case of the Doubting Doctor." The film, both instructive and amusing, was designed to settle many misunderstandings about medical organizations.

## SUPPLEMENTARY REPORT OF THE EXECUTIVE BOARD

Unless there is an emergency requiring a special meeting, this report is the Board's final accounting of its stewardship during the past organization year.

As is usually the case, the report deals largely with matters considered by the Board subsequent to the completion of the Annual Report of the Chairman. However, there are a few items previously referred to which require elaboration or are a carryover from the March Business Meeting.

*Honorary Membership for Dr. Leroy E. Burney.* Dr. Burney was proposed for Honorary membership at the Business Meeting of the Society on March 6, 1957.

As you know, Dr. Burney is Surgeon General of the Public Health Service, being the successor to

Dr. Leonard A. Scheele, who is also an Honorary member. He received his medical degree from Indiana University (1930); subsequently, he studied under a Rockefeller Fellowship at Johns Hopkins University School of Hygiene and Public Health, receiving the degree of Master of Science in Public Health in 1932.

Dr. Burney's service in the Regular Corps of the Public Health Service began in 1932. During the War, he was detailed to the Navy and was sent overseas by the War Shipping Administration for the purpose of determining the most effective measures for the control of communicable diseases. He was also on detail from the Public Health Service from 1945 to 1954, when he served as Secretary and State Health Commissioner of the Indiana State Board of Health. He came to Washington in 1954 as Assistant Surgeon General and Deputy Chief of the Bureau of State Services of the Public Health Service.

As required by the Constitution and By-laws, this proposal was referred to the Board of Censors, which gave its approval, and is now submitted to the Society for a vote.

*Council on Vocational Rehabilitation.* It is just a year ago that the Board reported to the Society that the Council had obtained a grant from the Office of Vocational Rehabilitation, Department of Health, Education and Welfare, in the amount of $18,576.00 for the purpose of studying "existing rehabilitation facilities in the Washington Metropolitan Area and assessment of present and future needs." Disappointed in what it considered inadequate funds to carry on the proposed project successfully, the Council was at first reluctant to proceed. However, it finally decided to go ahead with the assurance that, should the results justify it, additional funds would be made available.

Early in its existence the Council adopted the following broad objectives:

"1. To demonstrate the role of the local Medical Society in total community rehabilitation planning; to provide a 'case history' of the kind of thing which the medical profession can do by giving leadership and counsel to see that any planning with, or on behalf of the handicapped, will have the benefit of sound and advanced medical thinking.

"2. To take an inventory of rehabilitation programs and facilities in the Washington Metropolitan Area so as to gather insight into the existing programs, finances, and resources, any gaps in service, and/or duplications which may exist, and to prepare a report on findings, conclusions and recommendations pointing toward improved services to the handicapped.

"3. To foster broad scale community interest and support in rehabilitation of the handicapped.

"4. To promote understanding among physicians and allied personnel of the broadest concept of total rehabilitation and their respective roles.

"5. To develop some sort of a coördinating organization—a central service which can serve as a clearing house of information, and which can focus the work of other community planning groups, and help to prevent in the total program of

PHYSICIANS CITED FOR AID TO HANDICAPPED

Drs. Paul B. Cornely, Josephine J. Buchanan, and Charles D. Shields (left to right) received Citations for Meritorious Service from Major General Melvin J. Maas, Chairman of the President's Committee on Employment of the Physically Handicapped, May 1, at the Medical Society's Annual Business Meeting.

care for the handicapped, the fractionization of services, facilities, and personnel in the area.

"6. To publish a directory of resources for the handicapped."

Several months passed following receipt of the grant during which it deliberated on the various aspects of its project and the best course to pursue. It was finally decided to employ Miss Josephine Albrecht, who had been Executive Secretary of the Health Section, United Community Services, as Project Director. Miss Albrecht, who came to the Society on June 1, 1956, proved to be a fortunate choice.

The first step undertaken by the new Director was the development of an inclusive listing of tax-supported and voluntary health agencies and organizations concerned in any way with one or more aspects of rehabilitation of the physically, mentally or emotionally handicapped in the Washington Metropolitan Area. In the course of preparing the list, many contacts were made, leading to a meeting of all interested groups in the Medical Society's building last July.

More than 140 organizations, a number of which were represented at the above meeting, have been the object of detailed study by the Director. Five working committees have been organized, each of which is made up of persons from all related interests as well as from geographical areas.

This initial phase of the Council's program, it is anticipated, will be completed on June 30, 1957. The Council will then be ready to undertake "the formulation of conclusions and recommendations for an adequate, well-rounded, well-financed spectrum of community rehabilitation services."

As the first year of operation nears its completion, the Council is seeking a continuation grant from the Office of Vocational Rehabilitation in the amount of $20,344.00 for the period July, 1957, through June 30, 1958. Indications are that it will be granted.

Few of our members are aware that this project is unique in that it is the first time a medical society has undertaken a rehabilitation program with funds provided by the Federal Government. There is little doubt in the minds of the Board that, when it is completed it will reflect great credit upon our Society.

*Hospital Service Agency re Handling of United Community Services' Hospitalization Fund.* The Hospital Service Agency was originally established in the 1930's largely through the efforts of our Society. In the beginning it was known as the Central Admitting Bureau for Hospitals and was affiliated with an organization known as the Medical-Dental Exchange.

Over the years many changes have taken place which made it necessary to revamp the organization to meet the needs and demands of the times. Today, as its name implies, the organization is largely an agency of the voluntary hospitals. However, the medical profession still has a vital interest in HSA because of its responsibility for determining the eligibility of those entitled to free hospitalization and medical service in most of the District's voluntary hospitals.

At the present time the Society is represented on HSA's Board of Trustees by three members and on its Corporate Body by six members.

As stated above, one of the primary functions of HSA is to determine eligibility of those entitled to free hospitalization and medical service. It also acts as disbursing agent for some of the Community Chests in the Washington Metropolitan Area where hospitalization and clinic care of the medically indigent are concerned. Funds have also been received from a number of other voluntary agencies, including the Service Guild, which have been used for the same purposes as those available through UCS.

HSA is unique among agencies of its kind in the country in that it "recaptures" funds from persons accepting free care who later find that they can pay. These funds are used to supplement monies made available to the agency by the various Chests and to pay for more hospital care for eligible persons. Surprisingly, monies thus salvaged have been a source of long-standing controversy between HSA and the United Community Services.

Recently, the Hospital Council of the National Capital Area entered the picture. The Council has an application for financial membership in the United Community Services pending.* It seeks, with UCS's approval, to assume responsibility for its Hospitalization Fund. It has taken the position that, as an organization representing the hospitals of the community, it should supervise the HSA's activities, restricting them to the disbursement of UCS funds in the manner and at rates determined by the Council.

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* Dr. Oscar B. Hunter, Jr., reported to the membership that at a meeting held earlier the same day, May 1, the UCS approved the application of Hospital Council of the National Capital Area for financial membership in UCS. Dr. Hunter attended the meeting of the Board of Trustees of UCS as a member of the Corporate Body of Hospital Service Agency.

There are many other facets in this situation which, if time permitted, might well be included in this report. The Board, however, is chiefly concerned with making the point that it still considers HSA an agency deserving of the Society's support, if for no other reason than that it has demonstrated the need for a central agency to determine the eligibility of patients for free hospital and medical service. In taking this position, it is well aware that hospitals have not been entirely too happy with HSA; nevertheless, it should not be forgotten that the reason for its existence is due largely to the failure of hospitals to screen patients for eligibility in an efficient manner.

Under date of April 12, 1957, Mr. William H. Evans, President of HSA, wrote the Society in regard to the latest proposal of the Hospital Council regarding the handling of UCS Hospitalization Fund for 1957. The Council, he stated, had recommended that the rate of reimbursement to hospitals for patients be immediately fixed at the following interim rates:

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|---|---|
| (a) Free patients | $20.00 per patient day |
| (b) Part-pay patients | 10.00 per patient day |
| (c) Clinic visits | 4.00 per patient day |
| (d) Newborn care | 4.00 per patient day |

Mr. Evans said that HSA questioned the $4.00 for clinic visit because the cost figures had not been supplied by the Hospital Council, and, further, it wished the assurance that the proposed rate did not include any payment for professional services.

In reply to Mr. Evans, the Medical Society's Executive Board informed him, through its Secretary, that its position with respect to HSA is the same as it was in 1954 when the Society, at its Business Meeting on May 5, 1954, voted:

"A. That hospitals should be paid at the cost rate for the hospital care of the indigent or semi-indigent patients whether from tax funds or contributed funds.

"B. That Hospital Service Agency should be maintained as an independent metropolitan area agency to balance the interests of hospitals, Community Chests, physicians and the public—respecting patients supported by contributed funds."

On April 19, 1957, Mr. Richard M. Gaffney, Administrator of HSA, wrote the Society that the Agency's Board of Trustees had voted in favor of the reimbursement figures of the Hospital Council except for the clinic visit, which it decided should be $3.00.

Unless the Society thinks otherwise, this position with respect to HSA will remain unaltered.

*Professional Liability Insurance.* There have been a number of inquiries received from members of the Society about its relationship with the Saint Paul-Mercury Indemnity Company as regards its professional liability coverage. This matter has also been the subject of discussion at recent meetings of the Committee on Professional Liability Insurance and the Executive Board.

At a meeting of the Committee, held on April 16, 1957, it was voted to recommend the continuance of the Society's arrangement with the Saint Paul Company, which has been in effect the past year and a half. Dissatisfaction was expressed at the progress made in obtaining policyholders from among the membership, the total number on April 1, 1957, being 284. However, it was recognized that there have been factors militating against the rapid growth in the number of members purchasing Saint Paul Company coverage, among them being misunderstandings and differences which arose at the program's inception. These are, for the most part, no longer important factors and the Committee believes that a vigorous effort should be made to increase the number covered by the Saint Paul Company.

The Committee was recently informed that a Claims Office has been established in the Barr Building (telephone District 7-3329) by the Saint Paul Company. The Company's representative in charge is Mr. John Winters. Mr. Winters has not had any experience in the malpractice field; however, he has been an adjuster and should, within a reasonable time, become familiar with his new duties.

At its meeting on April 22, your Board was informed of the meeting held by the Committee and its position in regard to the continuance of the arrangement with the Saint Paul Company. It concurs in the position taken by the Committee and hopes there will be greater progress in the next few months than there has been in the past fifteen.

*Nomination to the District's Board of Education.* Recently, the Executive Board's attention was called to the vacancies which exist on the District's Board of Education. Dr. Charles D. Shields, Vice Chairman of the Council on Rehabilitation, proposed that Dr. Preston A. McLendon be recommended for one of the vacancies. Your Board enthusiastically concurred. It has dispatched a letter to the Honorable James R. Kirkland, Judge of the U. S. District Court of the District of Columbia, who makes appointments to the Board, in which it states that, in its opinion, there are few citizens in the District who are better qualified for membership on the Board of Education than Dr. McLendon. The Board felt certain that the Society would support this view and, therefore, recommends that the Society record itself in favor of this appointment.

*Proposed Amendments XXXII, XXXIII, XXXIV, and XXXV to the Society's Constitution and By-laws.* On the basis of the recommendations submitted to it by the various groups directly concerned, and on its own initiative, the Board presents the following Amendments for the Society's consideration:

### AMENDMENT XXXII

Section 1. Section 2 of Article II of Chapter IX of the Constitution and By-laws is hereby amended by changing the name of the Section on Neurology and Psychiatry to the Section on Neurology, Neurosurgery and Psychiatry.

### AMENDMENT XXXIII

Section 1. Section 1 of Amendment XXIII of the Constitution and By-laws is hereby repealed.

Section 2. Articles I and V of Chapter VIII of the Constitution and By-laws are hereby amended by changing the name of the Committee on Public Relations to the Committee on Public Information and Education.

### AMENDMENT XXXIV

Section 1. Section 2 of Amendment XXVIII of the Constitution and By-laws is hereby amended by changing the name of the Board of Censors to the Board of Credentials.

### AMENDMENT XXXV*

Section 1. Article I of Chapter IX of the Constitution and By-laws is hereby amended by repealing and deleting from said Article I the third sentence thereof reading as follows: "Any active, life or associate member of the Society may, at his option, join any section but must conform to such financial or other regulations as may be imposed by the section, under penalty in case of not so conforming of forfeiting membership in the section." In lieu thereof the following sentences are substituted: "Any active or life member of the Society may, at his option, join any section provided that such member is qualified in the specialty which the section represents, in accordance with the rules of the Society. Such members must conform to financial or other regulations as may be imposed by the section, under penalty in case of not so conforming of forfeiting membership in the section. Further that any active, life or associate member of the Society not so qualified shall be privileged to participate in the meetings of any section but without vote."

The above amendments are presented at this meeting and will be submitted to vote at the next business meeting.

*Conclusion.* This concludes the business which the Board has to present to you at this final business meeting of the year. As stated in the beginning, if there is any urgent need for a special business meeting, it will be called. However, there is nothing at present to indicate that this will be necessary.

Finally, your attention is called to the fact that the 26th ANNUAL SCIENTIFIC ASSEMBLY is scheduled to be held at the Hotel Statler on October 14, 15 and 16. This promises to be another outstanding meeting. Some unusual plans have been made for the scientific program. You are urged to note the dates on your calendar so that nothing will interfere with your being present.

Respectfully submitted,
WALLACE M. YATER, M.D., *Chairman*
RALPH M. CAULK, M.D.
RAYMOND T. HOLDEN, M.D.
PRESTON A. MCLENDON, M.D.
W. ROSS MORRIS, M.D.
HERBERT P. RAMSEY, M.D.
JAMES W. WATTS, M.D.
THEODORE WIPRUD, *Secretary*

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* Deleted from the report by vote of the membership.

# On the Lighter Side

There are many women duckpin bowling leagues in the Metropolitan Washington Area, but outside of the women's major leagues there isn't a female bowling league that stacks up to our own Woman's Auxiliary Medical Society Bowling League in competitive intensity and personal pride in averages, strikes and spares. Of course the members have their share of fun too, but in a grimmer, more serious way than the casual flibberty-gibbet bowler that you see in the majority of the weaker-sex leagues. The men's District Medical Bowling League doff their toppers to the W-A-M-S-Bowling League in respect and pride for the ladies' achievements in spilling the pins.

The final standing of the W-A-M-S-Bowling League in games won and lost were as follows: Dotty Frawley's (94-51) team won the coveted first place by winning 35 and losing only 22. The other members of the championship team were Hazel Stuart, Anne Rapee, Florence Scalessa, and Marjorie Schumacher. Second place, one game behind the leaders, went to Becky Hodge's team of Helen Burton, Anne McDonald, Jane O'Keefe and Dell Dean. They won 34 and lost 23. Third place was captured by Barbara Murphy's team, who won 33 and lost 24. Co-bowlers were Helen Quayle (93-21), Doris McCune, Marge Murray, and Marian Belair. In fourth place with a 32–25 record was the team piloted by Jane Price (91-28). Jane's bowling team was represented by Jean Choate, Hazel Whitley, Dotty Moses, and Ruby Burns. Fifth place prizes were accepted by Jane Evan's (91-1) team of Billie Williams, Wealthy Reisinger, Mary Jorgenson, and Peggy Richtmeyer. They won 31, lost 26.

In sixth place, with 30–27, was Helen Preece's team. Seventh place with 29–28 fell to the team of Anne Feldman (94-27). Eighth, ninth, tenth, and eleventh places were taken by teams that won 29 games and lost 28. These teams were captained by Mrs. George McLain (93-41), Peggy Dusbabek, Louise Radice (91-11), and Mrs. Whilton. The twelfth and thirteenth places in the League were assigned to Mrs. E. Marland's and Mrs. Crofton's teams, who won 28 and lost 29 games. In fourteenth place, with a 27–30 won and lost record, was Helen Marie Doland's (94-1) team; and in fifteenth place, with an identical record except for a lower pinfall, was Mrs. Ferguson's team. In sixteenth and seventeenth places with a 26-31 record were the teams of Betty Anne Hall and Mrs. B. Morris. Mrs. Haile's team, who won 23 and lost 34 games during the season, was notched in the eighteenth place, and in the nineteenth and twentieth places were the teams of Mrs. J. Irey and Mrs. Leonardo. Each won 22 and lost 35 games.

Dorothy Frawley's individual average of 94-51 was good enough to stand up under the competition of Anne Feldman's 94-27, and Helen Marie Doland's 94-1, to lead the Woman's Auxiliary Medical Society Bowling League. (I wonder if that is the real reason why Jim Frawley stopped bowling this year.)

Peggy Donald, a terrific lady bowler, rolled the high individual game of the bowling year with a professional 140. Mrs. Gates was a close second with a 139. Mrs. McClain had a 135, Lucille Brown 134, Helen Marie Doland 132, Helen Quayle 132, Irma Hobart 129, Polly Stow 126, Louise Radice 124, and Ruby Burns a neat 123.

Helen Quayle, who managed and guided the Woman's League as chairman during the 1956–57 bowling season, also managed a high individual set of 331. Louise Radice also spilled the pins for a set of 331. Other high sets were bowled by Lucille Brown 329, Anne Feldman 324, Dorothy Frawley 322, Sue Horstman 321, Joan Dorman 319, Mrs. McClain 319, Peggy Donald 316, and Mrs. Gates 316.

High individual spares were spilled by expert two-baller Lucille Brown with 73. Anne Feldman, another two-ball artist, had 69. Helen Quayle and Helen Marie Doland were tied with 68 each, and high-average Dotty Frawley scattered 67 spares throughout the season.

One-ball specialist Betty Anne Hall and Sue Horstman tied each other for the League's highest number of strikes—21. Mrs. George McClain exercised the privilege of one-balling 20 strikes. Peg Richtmeyer had 18, Irma Hobart straight-armed 17, and Becky Hodge spilled 16 of the special variety.

Grace Curry and Janie Weller rolled a good flat game of 94, with Anne Feldman knocking down 93 pins without benefit of marks.

# The MS Question Box

Q. *Why is Medical Service called the Doctors' Plan?*

A. Medical Service of D. C. was organized and sponsored by The Medical Society of the District of Columbia. The policy-making body of Medical Service is composed of 15 members, the majority of whom are physicians in the private practice of medicine. Day-to-day problems of fees and professional matters are considered by the Physicians' Services Committee, which is composed of 10 physicians in the private practice of medicine, representing various specialty groups, and 10 alternate members similarly distributed. Major changes in fees result from recommendations of the various specialty groups, which are considered by the Fee Committee of Medical Service and the Board of Trustees; all fee changes and changes in income ceiling levels are submitted to the Participating Physicians of Medical Service for approval.

Liaison between the medical profession and Medical Service and the Board of Medical Service is also maintained by the Medical Advisory Committee, composed of practicing physicians representing specialty groups and the adjacent medical societies. A representative from this Committee attends meetings of the Board of Trustees.

The participation of the medical profession in the affairs of Medical Service as outlined above suggests one of the most compelling reasons for calling Medical Service of the District of Columbia the Doctors' Plan.

Q. *Why is it necessary to raise repeatedly the income levels in Medical Service?*

A. When Medical Service began operations in 1948, Participating Physicians were required to provide their services at no extra charge to patients whose total family income did not exceed $4,500 in the preceding year. The best evidence was that this gave a service benefit to approximately half of the families in the Washington area, and the contribution of Participating Physicians was directed primarily at this group. With the continual rise in family incomes, it is obvious that the $4,500 level would cover a much smaller percentage of the population today.

The $6,000 income level established for the new Surgical-Medical Contract is expected to cover approximately half the family groups in the Washington area, just as the $4,500 family income level did originally. Similarly, fees under the new Surgical-Medical Contract are approximately 1/3 higher than they were under the original Surgical Contract in 1948. The net effect of these changes is actually to preserve the status quo and to apply it to a much larger proportion of the whole community.

Q. *Is Medical Service in good financial condition?*

A. Medical Service has unassigned reserves of approximately 2¼ million dollars, an amount sufficient to operate the Plan and pay claims for about 4¼ months. This corresponds to about $4.00 each for subscribers and dependents under the Plan. While this is a fairly sound financial situation, additions to reserves have been decreasing percentagewise to the extent that only 2.7 per cent of income was added to reserves in 1956. This trend is the justification for the conservative attitude of the Board of Trustees.

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(*Continued from 325*)

Next bowling season, Helen Preece will guide the destinies of the Woman's Auxiliary Medical Society Bowling League, with Lucille Brown serving as her good right hand and Vice Chairman. Mary Duchez will take care of the secretarial duties and Priscilla Hixson will manage the money as treasurer.

Good luck and good bowling next season, members of the W-A-M-S-Bowling League!

CHUCKLE NOTE: God made women without a sense of humor so that they could love men instead of laughing at them.

J. EARL KADAN, M.D.

# News and Personals

## MEETINGS

**The Sixth International Congress of Otolaryngology** closed a successful six-day meeting at the Hotel Statler, May 10. Delegates were present from countries throughout the world.

Three members of the Medical Society of the District of Columbia participated in the scientific program. They were Drs. William M. Trible, J. E. Ash, and A. B. C. Knudson. Dr. Trible presented a paper, May 8, on "Effect of Preoperative Radiation on Subsequent Surgery in Cancer of the Larynx." Dr. Ash gave a paper the following day on "Neurogenic Tumors of the Upper Respiratory Tract." A team of scientists from the Physical Medicine and Rehabilitation Service and Department of Veterans Benefits, Veterans Administration, presented a scientific exhibit on "Advances in Audiology in the Veterans Administration." Dr. Knudson was a member of this group.

Dr. Victor R. Alfaro was Chairman of the Committee on Local Arrangements.

A large delegation of Washington physicians attended and took part in the **Ninth Annual Teaching Seminar of the International Academy of Proctology**, held at The Plaza, New York, April 29–30 and May 1 and 2. The following papers, authored by members of the Society, were presented:

"Biological Factors Influencing the Management of Carcinoma of the Left Colon," Dr. Jacob J. Weinstein, Associate in Surgery, George Washington University School of Medicine and Hospital.

"The Extent of Resection for Carcinoma of the Colon," Dr. William Lewis Amoroso, Jr., Clinical Instructor in Surgery, Georgetown University School of Medicine.

"Abdominal Migraine," Drs. Lester S. Blumenthal and Marvin Fuchs, Associates in Medicine, George Washington University School of Medicine.

"Comparative Study of the Effects of Enemas on the Terminal Colonic Segment," Dr. Jerome H. Epstein, Chief Resident in Medicine, George Washington University Hospital, and Dr. Clarence R. Hartman, Associate Clinical Professor of Medicine, George Washington University School of Medicine.

"Treatment of the Anemias of Colonic Diseases with Blood Transfusions: Its Uses and Abuses," Dr. Jack J. Rheingold, Associate in Medicine, George Washington University School of Medicine.

"Acute Obstruction of the Large Bowel," Dr. Alec Horwitz, Associate Clinical Professor of Surgery, George Washington University School of Medicine.

"A Philosophy of the Over-all Care of the Cancer Patient," Dr. Calvin T. Klopp, Assistant Clinical Professor of Surgery, George Washington University School of Medicine, and Director of the Cancer Clinic, George Washington Hospital.

Dr. Alfred L. Solow, Head of Proctology at New England Hospital in Boston, was moderator of a Symposium on Constipation. Three of the four speakers who took part in the symposium were Washington physicians. The topics presented were:

"Spastic and Atonic Constipation," Dr. Peter D. Comanduras, Associate Professor of Clinical Medicine, George Washington University School of Medicine.

"Psychosomatic Mechanisms in Constipation and Diarrhea," Dr. Daniel S. Jaffe, Assistant Clinical Professor of Psychiatry, Georgetown University School of Medicine.

"Postoperative Constipation," Dr. Philip H. Philbin, Clinical Instructor in Surgery, Georgetown University School of Medicine.

Dr. Jacob J. Weinstein was Chairman for the Fifth Scientific Session, May 1. Among the papers presented at this session were the following:

"Coccygodynia as Related to the Proctologist—Operative and Nonoperative Management," Dr. Aurthur R. Wein, George Washington University Hospital.

"Malformations of the Ano-Rectum Requiring Treatment in the Neonatal Period," Dr. Leonard L. Deitz, Clinical Instructor in Surgery, Georgetown University School of Medicine.

"Anorectal Manifestations of Cutaneous Diseases," Dr Murry M. Robinson, Instructor in Dermatology, Georgetown University and Howard University Schools of Medicine.

**The District of Columbia and Maryland Academies of General Practice** held their **Third Combined Annual Scientific Session** at the National Institutes of Health in Bethesda, Md., May 16.

Dr. Frank S. Pellegrini, President of the D. C. Academy of General Practice, presided at the opening session. Members of the staff of the National Institutes of Health presented the program, which included participation by several Associate members of the Medical Society. "The Laboratory Diagnosis of Viral Diseases," by Dr. John P. Utz, and "Respiratory Viral Diseases," by Dr. N. B. McCullough, both of the National Institute of Allergy and Infectious Diseases, were among the papers presented. Dr. R. R. Smith, Chief of the Surgery Branch of the National Cancer Institute, took part in a Panel Discussion on Some Current Concepts in Cancer. His presentation concerned "Metastatic Carcinoma of the Breast." In the same panel, Dr. Roy Hertz, Chief of the Endocrinology Branch of the National Cancer Institute, an Active member of the Medical Society, presented a paper on "Therapy of Hormone-producing Tumors."

**The Section on General Practice** met in the Medical Society's Library, April 23. Dr. Richard Auld, Executive Director of the Retarded Children's Clinic at Georgetown University Hospital, addressed the members on "The Diagnosis and Education of the Retarded Child."

The annual meetings of two organizations were combined, May 8, in the auditorium of the District Medical Society when the Society's **Section on Internal Medicine and Allied Subspecialties and the District of Columbia Society of Internal Medicine** held a joint session. The following new officers were elected to serve the Section on Internal Medicine:

Dr. Marcel Foret, *Chairman*; Dr. Maurice Friedman, *Vice Chairman*; Dr. Frank Bacon, *Secretary*; Dr. Robert Montgomery, *Treasurer*; and Dr. William Walsh, *member of Executive Committee.*

The D. C. Society of Internal Medicine elected the following slate of officers:

Dr. Henry Ecker, *President*; Dr. Clayton Ethridge, *President-elect*; Dr. Frank Bacon, *Secretary*; Dr. Robert Montgomery *Treasurer;* and Drs. Stuart Foster and Benjamin Manchester, *members of Executive Committee.*

**The Section on Anesthesiology and the D. C. Society of Anesthesiologists** met in a joint session in the Medical Society's Library, May 13. Dr. John C. Rose, of the Department of Medicine, Georgetown University School of Medicine, was the speaker; his subject was "Circulatory Studies in Hypothermia."

The following officers were elected for next year:

Dr. William E. Bageant, *President*; Dr. Arch S. Russell, Jr., *Vice President and President-elect*; Dr. Thomas F. McDermott, *Secretary-Treasurer*; Drs. William H. Devlin and Joel B. Hoberman, *members of Executive Committee.*

**The Washington Psychiatric Society** met in the Medical Society's Auditorium, April 26. The guest speaker was Dr. Jack R. Ewalt, Director of the Joint Commission on Mental Illness and Health, who gave a progress report on the work of the Commission. Discussion was led by Dr. Richard Williams, of the National Institute of Mental Health, and by Dr. Julius Schreiber.

The newly elected officers of the Society are as follows:

Dr. Seymour J. Rosenberg, *President*; Dr. Robert A. Cohen, *President-elect*; Dr. Marvin L. Adland, *Secretary*; Dr. Norman Taub, *Treasurer*; Drs. James P. Scanlon and Leon Yochelson, *members of the Council.*

**The 20th Annual Meeting of the Medical Society of Saint Elizabeths Hospital** was held in the Geriatric Building Auditorium at St. Elizabeths, May 3–4. The following papers were presented at the session by members of the District of Columbia Medical Society:

"Chemopallidectomy: A Surgical Technic for the Treatment of Parkinsonism," Drs. John T. Lord, Harvey H. Ammerman and Harold Stevens.

"Psychosomatic Research and Theory with Special Reference to Bowel Function," Dr. Daniel S. Jaffe.

"The Importance of being Frustrated," Dr. George W. Sprehn.

"Intuition in the Methodology of Psychoanalysis," Dr. Richard Board.

"On Intuitive Psychotherapeutic Intervention," Dr. Maxwell Boverman.

"Hysteria, Hysterical Personality and 'Hysterical' Conversion," Drs. Paul Chodoff and Henry Lyons.

"The Personal Problem Recording in the Medical Chart," Dr. Agnes Conrad.

"Public Health Practice in the Follow-up of Patients," Dr. Marvin E. Perkins.

"Problems in Initiating Psychoanalytic Psychotherapy of a Schizophrenic Following Hospitalization," Dr. Arcangelo D'Amore.

The closing paper on the scientific program, May 4, was given by Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, on "The Superintendent's Reflections."

Dr. Otis Farley is President of the Society. Others who took part in the meeting as presiding officers were Drs. Norman Taub, David W. Harris and Leon Salzman. Discussants of papers included Drs. Ammerman, Stevens, Douglas Price, Zigmond M. Lebensohn, Leon Yochelson, Joseph Abrahams, Oscar Legault, Christopher T. Bever, Arthur H. Kiracofe, and Addison M. Duval. The two-day meeting concluded with a dinner dance at the Shoreham Hotel.

**The Jacobi Society of Washington** held a dinner meeting at the Willard Hotel on April 29. Guest speakers were Drs. Joseph E. Murray and Warren R. Guild, of the Peter Bent Brigham Hospital and Harvard Medical School, Boston. The subject presented by these physicians was "Current Clinical and Laboratory Studies on Skin and Kidney Homotransplantation."

The guest speaker at the dinner meeting, May 20, was Dr. Milton Helpern, Deputy Medical Examiner for the City of New York. His subject was "Some Aspects of Medical Criminology." Election of officers followed the scientific program. The President for 1957–58 will be Dr. Sydney Ross. New officers elected were:

Dr. Carl Silverman, *President-elect*; Dr. Stanley Kirstein, *Vice President*; Dr. Melvin Goodman, *Secretary*; Dr. Seymour Alpert, *Treasurer*; and Dr. Lawrence Putnam, *member of Executive Committee.*

**The Medical Alumni Association of Providence Hospital,** together with the Education Committee of its staff, sponsored a **Neurology Workshop** at the Hospital, May 30. The Workshop was moderated by Dr. John P. Gallagher; the speakers were Drs. Gallagher, Pearce Bailey, O. Hugh Fulcher, Francis M. Forster, John Green, Desmond S. O'Doherty, Stacy L. Rollins, and Bushnell Smith.

**The William Beaumont Society,** an honor society for juniors and seniors of George Washington University School of Medicine, held its Annual Banquet, May 1, at the Commissioned Officers' Club in Bethesda. Mr. Merlin H. Mauck, President of the Society, presided at the presentation of awards and program.

The guest speaker was Dr. Daniel L. Borden, Professor Emeritus of Clinical Surgery and Director of Health Administration, George Washington University, who recommended that every physician should have a hobby. He then showed slides which featured his own hobby, sailboating in the waters off New England and on Lake Ontario.

Dr. Calvin T. Klopp, faculty sponsor of the Society, received a gift of medical books from the students in appreciation of his services to the Society. He was affectionately designated as "the kind of physician that makes you want to become a doctor." The Annual Klopp Trophy and Award were presented to Mr. William Bruce Anderson for the best scientific paper presented during the year.

Announcement of the three Pfizer Award winners was made by A. Louise Eckburg, Assistant Editor of the MEDICAL ANNALS, who also judged the papers. First award went to Mr. Nicholas L. Zouras, for his paper on "Modern Concepts of Aging;" second and third awards, to Miss Claire Hammel and Mr. George W. Bauer. Checks in the amounts of $50, $25, and $25 were presented to these students by Dr. M. William Amster, of the Pfizer Laboratories.

## GENERAL NEWS

**The Executive Board of the Medical Society of the District of Columbia** met, April 22, for its regular business session. The Board voted to contribute $100 each to the local chapters of the Student American Medical Association which are affiliated with George Washington, Georgetown and Howard University Schools of Medicine.

In communications addressed to the Executive Board and to the President, Dr. J. Keith Cromer, President of the Washington Gynecological Society, had proposed the establishment of a Pelvic Cancer Review Board. The Society's Committee on Cancer Control approved its establishment. The Executive Board also gave its approval and voted to apply to the District Division of the American Cancer Society for funds which would reimburse the Medical Society for expenses incurred in connection with the operation of such a board.

President Caulk submitted the following appointees to the Special Committee on the Constitution and By-laws: Dr. W. LeRoy Dunn, Chairman; Drs., Alan F. Kreglow and J. Winthrop Peabody, Jr.

The Executive Board authorized President Caulk to write to Judge James R. Kirkland, recommending that Dr. Preston A. McLendon, Past President of the Medical Society and a member of the Executive Board, be proposed for appointment to the District of Columbia Board of Education.

**Trustees of Medical Service of the District of Columbia,** Washington's Blue Shield Plan, on May 7 reëlected **Dr. Donald Stubbs** as President for another year. Dr. Stubbs has served as President of Medical Service since 1952.

Besides serving as President and trustee of the local Blue Shield Plan, Dr. Stubbs is a member of the National Blue Shield Commission and Chairman of the Blue Shield Government Relations Committee. He has represented Blue Shield Medical Care Plans in connection with the recent legislation providing health benefits to the dependents of members of the uniformed services. Currently he is participating in discussions with regard to health benefits for Federal employees.

Other officers elected were: Dr. James A. Dusbabek, First Vice President; Robert M. Holmes, Jr., Second Vice President; Bruce Baird, Treasurer; and Theodore Wiprud, Secretary. George B. McGovern is Manager of Medical Service and serves as Assistant Secretary to the Board of Trustees.

Five new members were elected to the Board of Trustees of Medical Service at the Annual Meeting of Participating Physicians, April 17. They are: Drs. Read N. Calvert, Ernest A. Gould, Frederick C. Heath, Vane M. Hoge, and W. Leonard Weyl. Dr. Hoge is Assistant Surgeon General of the U. S. Public Health Service.

Reëlected to the Board of Trustees were Drs. Henry L. Darner, Edgar M. McPeak, Messrs. Bruce Baird, Robert M. Holmes, Jr., Robert C. McCann, and Philip M. Talbott. The other members of the Board are Drs. Stubbs, Dusbabek, Henry D. Ecker, William R. Perkins, and Theodore Wiprud, *ex officio*, without vote.

With more than 600,000 participants enrolled, Medical Service of D. C. is one of the Nation's most rapidly growing Blue Shield Plans. In 1956 there was a net gain in enrollment of more than 62,000 participants; the D. C. Blue Shield Plan has the second highest percentage of population enrolled of all Blue Shield Plans in the country.

At the Annual Meeting of the Board of Trustees of **Group Hospitalization, Inc.,** the Honorable Joseph H. Himes, President, announced that the net enrollment gain in 1956 was 47,000 participants and that the enrollment had passed the 700,000 mark.

Mr. Himes was reëlected President for another year as well as all other officers. They are: Alfred G. Neal, First Vice President; Charles D. Drayton, Second Vice President; James H. Lemon, Secretary; and Bruce Baird, Treasurer.

Physicians presently serving on the Board of Trustees are Drs. Paul Kiernan, A. Magruder MacDonald, Howard P. Parker, and Richard H. Todd.

**Dr. Daniel Blain,** Medical Director of the **American Psychiatric Association,** announces that the Association has set up a project to study ways in which a greater understanding of psychiatry can be conveyed to physicians in general practice. The program will be administered through the Central Office of the Association in Washington. A Liaison Committee with the American Academy of General Practice will serve the project in an advisory capacity. One of the members of this committee is Dr. I. Phillips Frohman.

The project, which has been made possible by a grant from the National Committee Against Mental Illness, will be directed by Dr. Charles E. Goshen, of Long Island, N. Y.

**The Annual Medical Staff Banquet of Garfield Memorial Hospital** was held on April 29 at the Kennedy-Warren.

The Harry Hyland Kerr Awards, presented for the best essays of the House staff, went to the following: first prize, Dr. Gerold K. Klein, who was the first prize winner last year, citation and $100 check for reporting on a technic to restore function to a bone-damaged finger; second prize, citation and $75, to Dr. Dario R. Nolasco, resident in surgery, for a paper on carcinoid tumors; third prize, citation and $50, to Dr. Paul Negulescu, resident in surgery, for a paper on bilateral adrenalectomy. Honorable mention went to Drs. Ju-Duk Yun, George Hewlett, and George A. Picard.

Citations and plaques were presented to three physicians who have served as President of the Hospital Board. They are: Dr. Henry C. Macatee, 1930–1944; Dr. Howard P. Parker, 1946–1952; and Dr. W. Dabney Jarman, 1955 to the present.

The following departmental chairmen received citations: Drs. Ralph M. Caulk, William W. Chase, Francis X. Courtney, W. LeRoy Dunn, Beveridge Miller, Herbert P. Ramsey, E. Clarence Rice, W. Dandridge Terrell, and J. Lawn Thompson, Jr.

**Dr. Worth B. Daniels,** Chairman of the Board of Regents of the **National Library of Medicine,** announced the selection of a site for the proposed new library building following a meeting of the Board, April 29. The structure will be located on the grounds of the National Institutes of Health in Bethesda, Maryland.

Although the Board considered sites in other cities of the United States, the Washington area was favored by the Association of American Medical Colleges and the Association of American Dental Schools, both of which were consulted by the Board following its first meeting.

In its new location, the Library will be in proximity to two large medical centers, Georgetown University and George Washington University, and accessible by public transportation. The grounds of the Institutes of Health can furnish supporting services and facilities, including space for parking and room for subsequent additions to the Library stacks.

The fifth edition of the **Directory of Psychiatrists and Clinical Psychiatric Facilities in the Washington Area** has just been published by the Washington Psychiatric Society. It was compiled and edited by Dr. Henry P. Laughlin, Associate member of the District Medical Society, who originated the Directory and has edited all editions. The preface was written by Dr. Winfred Overholser, President of the Society. In addition to a listing of the psychiatrists of the Washington Metropolitan Area, the Directory has a section on clinical psychiatric facilities and clinics, giving pertinent information for each. A history of the Society has been contributed by Dr. Zigmond M. Lebensohn.

The Directory sells for $2.00 and may be obtained from Dr. Norman Taub, Treasurer of the Society, or from the District of Columbia Medical Society at 1718 M Street, N.W. It is also available at the offices of the American Psychiatric Association, the Washington School of Psychiatry, and the Montgomery County Medical Society.

**The Southern Medical Association** will soon erect a modern headquarters office building in Birmingham, Ala., to be located on Highland Avenue at Niazuma, which it hopes to occupy during 1957, its fifty-first year.

The first level will include a lobby, a room for the Woman's Auxiliary, reserve office space, storage rooms and mechanical equipment. The second level will consist of a second lobby-reception area, a conference-library room, executive offices, business offices, the editorial department of the *Southern Medical Journal*, and an employee lunchroom and lounge.

The building and site will represent an investment fo $175,000, of which $50,000 is land cost.

The Association has published and distributed to its 10,000 members a beautiful brochure describing the building in detail with a full-color illustration of the proposed building. The brochure also sets out the plan of financing the cost of the building, which includes voluntary contributions to the Home Building Fund by members and friends of the Association. **Dr. Harry Lee Claud,** Councilor from the District of Columbia, is a member of both the Home Building Committee and the Home Building Finance Committee.

More than 4,200 retail clerks and meat cutters employed in 257 food stores in the District of Columbia and nearby Maryland and Virginia are being enrolled in **Group Hospitalization, Inc. and Medical Service of D. C.**

The full-time employees, members of Retail Clerks Local 639-A and Local 1501 and of the Meat Cutters Local 555, are being enrolled through the Welfare Funds developed by the union and the subscribing employers. The protection, already effective for employees of American Stores, the

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| March 10 | Dr. Julius Schreiber | Emotional Basis for Effective Marriage and Family Life | Lecture Series, Kenworthy Memorial Committee of Sidwell Friends School |
| March 19 | Dr. Julius Schreiber | Parents and Teenagers | Washington Hebrew Sunday School |
| March 26 | Dr. Julius Schreiber | Marital Problems and Emotional Maturity | Masonic Lodge, Takoma Park |
| March 31 | Dr. Zigmond M. Lebensohn | Conceptions and Misconceptions in Psychiatry | Lecture Series, Kenworthy Memorial Committee of Sidwell Friends School |
| April 9 | Dr. Julius Schreiber | The Emotionally Healthy Family | Timberlane Parent-Teachers Association, Falls Church, Va. |
| April 14 | Dr. T. Douglas Noble | Psychological Aspects of Geriatrics | Lecture Series, Kenworthy Memorial Committee of Sidwell Friends School |
| April 15 | Dr. Lois I. Platt | Discussion of Cancer Education films | Representatives of American Legion Auxiliary Posts in Metropolitan Area |
| April 23 | Dr. Henry P. Laughlin | Toward a Happy Family Life | Hunter College Alumni |
| May 5 | Dr. Julius Schreiber | Modern Life and Emotional Maturity | Unitarian Church, Arlington, Va. |
| May 6 | Dr. John R. Cavanagh | Sex, Marriage, and Mental Health | District Social Hygiene Society |
| May 7 | Dr. Julius Schreiber | Doing Our Jobs as Parents | Southeast Neighborhood House |
| May 9 | Dr. Julius Schreiber | Current Research Needs in Mental Health Public Education | American Association for Public Opinion Research |
| May 14 | Dr. Earl H. Mitchell, Jr. | Alcoholism | Association of Undergraduate and Practical Nurses of D. C. |
| May 21 | Dr. Robert H. Parrott | Adolescence | Janney School Parent - Teachers Association |
| May 22 | Dr. Juliana Day | Frigidity | WTOP-TV, Donna Douglas Program |
| May 28 | Dr. Preston A. McLendon | Parent-Teenage Confusion | Janney School Parent - Teachers Association |
| May 29 | Dr. M. Frances Ayres | Dermatitis in Children | WTOP-TV, Donna Douglas Program |
| June 5 | Dr. Josephine J. Buchanan | Rehabilitation | WTOP-TV, Donna Douglas Program |

Atlantic & Pacific Tea Company, Food Fair, and Safeway Stores, will within the next 2 months become effective for employees of Greenbelt Consumers Coöperative and Rochdale Coöperative and for those full-time employees of Giant Food Stores represented by Retail Clerks Local 1501. The same coverage also has been made available to employees of Food Lane of Washington, D. C.

## PERSONALS

**Dr. John L. Parks** will succeed Dr. Walter A. Bloedorn as **Dean of George Washington University School of Medicine,** September 1. Dr. Parks is presently Professor of Obstetrics and Gynecology.

Dr. Parks joined the medical faculty of the School of Medicine in 1939; he became Head of the University's Department of Obstetrics and Gynecology and Chief of Obstetrics and Gynecology of the Hospital in 1944. A graduate of the University of Wisconsin, he holds the degrees of Bachelor of Arts, Master of Science, and Doctor of Medicine. He also taught at the University of Wisconsin before coming to Washington.

He is a Director of the American Board of Obstetrics and Gynecology; Treasurer of the American Gynecological Society; member of the Board of Governors of the American College of Surgeons; Vice President (1956) of the American College of Obstetricians; a member of the Executive Committee of the District of Columbia General Hospital; Consultant in Obstetrics to Walter Reed Army Hospital and Children's Bureau; and a member of the Board of Trustees of the House of Mercy. He has been an Active member of the Medical Society of the District of Columbia since he came to Washington and is a member of many other scientific organizations.

JOHN L. PARKS, M.D.

*New Dean of Medicine at George Washington University*

**Dr. Brian B. Blades,** Professor and Head of Surgery at George Washington University School of Medicine and Hospital, was elected President of the American Association for Thoracic Surgery, May 6, at the Association's annual meeting in Chicago. Dr. Blades was Vice President of the Association last year.

During the meeting, which was held at the Palmer House in Chicago, May 5–7, a group of surgeons, representing the Society of Thoracic Surgeons of Great Britain and Ireland, presented the Association with a gold medallion to be worn henceforth as an emblem of office by all presidents of the American Association for Thoracic Surgery.

**Dr. Robert E. Moran** was elected Vice President and President-elect of the American Association of Plastic and Reconstructive Surgery at its annual meeting at Skytop Lodge in the Poconos, May 8–10.

In Philadelphia, May 4–7, Dr. Moran assisted in conducting examinations for the American Board of Plastic Surgery. **Drs. Arthur Dick and Albert F. Fleury,** both members of the District Medical Society, successfully completed the examinations and were certified by the Board in their specialty.

**Dr. Paul B. Cornely,** Medical Director of Freedmen's Hospital, was elected Chairman of the Health

Section of United Community Services at its annual dinner meeting, April 25, at the Occidental Restaurant. Dr. Cornely is head of the Department of Medicine and Public Health at Howard University and has been active in UCS and its predecessor, the Council of Social Agencies, since 1935.

Among matters discussed at the meeting were problems of nursing home care and community responsibility for the aged and disabled. Panel discussants included **Dr. Clifford R. Gruver,** Chairman of the District Medical Society's Committee on Public Health; **Dr. Charles D. Shields,** of Georgetown University Hospital; and Dr. Bruce Underwood, head of Nursing Home Section, Chronic Disease Program, Public Health Service.

**Dr. John Newdorp** is the new Medical Administrator of the United Mine Workers' Memorial Hospital Association. He will begin his new duties, July 1.

Dr. Newdorp will succeed **Dr. Frederick D. Mott,** who is leaving Washington to accept the position of Executive Director of the recently formed Community Health Association of Detroit, Michigan.

Dr. Newdorp has been Deputy Medical Administrator since 1952. The United Mine Workers operates ten hospitals in coal mining areas in Kentucky, West Virginia, and Virginia. Drs. Mott and Newdorp are Associate members of the District Medical Society.

**Dr. William P. Herbst, Jr.,** addressed the Annual Meeting of the American Urological Association in Pittsburgh, May 8, on the subject, "The Steroids."

**Dr. Charles F. Geschickter** was one of a group of scientists from Georgetown University School of Medicine whose report on "Phthalimide Compounds in Acute Barbiturate Poisoning" was presented at the meeting of the American Society for Pharmacology and Experimental Therapeutics, held in Chicago, April 16. The tests reported on had been conducted by Mr. Lawrence F. Sancilio and Drs. Theodore Koppanyi and Leonard M. Rice, as well as Dr. Geschickter, all of Georgetown.

**Dr. Winfred Overholser,** Superintendent of St. Elizabeths Hospital, was a guest speaker at the Annual Dinner of the Indiana Academy of General Practice, April 17, in Indianapolis. Dr. Overholser spoke on "The Place of Psychiatry in General Practice."

**Dr. Walter A. Bloedorn,** retiring Dean of George Washington University School of Medicine, has been elected **President of the National Board of Medical Examiners.** He has been a member of the Executive Committee of the National Board for several years.

WALTER A. BLOEDORN, M.D.

*President, National Board of Medical Examiners*

Dr. Bloedorn joined the medical faculty of the School of Medicine in 1926 as Professor of Tropical Medicine, resigning in 1928 to become Chief of Staff at Gallinger Municipal Hospital (now D. C. General Hospital). He was appointed Professor of Medicine, Director of Clinics, and Assistant Dean at George Washington University in 1931 and was appointed Dean of the School of Medicine in 1939.

Dr. Bloedorn is a graduate of Creighton University Medical School. He earned the degrees of Bachelor of Arts and Master of Arts at George Washington University, from which institution he was also awarded the honorary degree of Doctor of Science in 1948. He served in the Navy Medical Corps during the 1920's and attained the rank of Commander.

He is a trustee of the Gorgas Institute; in 1937–38 he served on the National Commission for UNESCO. He is a diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, a member of the American Medical Association and District Medical Society, and Past President of the Association of American Medical Colleges.

Dr. Bloedorn was given a reception by his students, April 25, at the Shoreham Hotel, to mark his 30 years of teaching in the University's Medical School.

**Dr. W. Montague Cobb,** Professor and Head of the Department of Anatomy, Howard University School of Medicine, was elected President of the American Association of Physical Anthropologists at the 26th Annual Meeting of the Society, held at the University of Michigan, Ann Arbor, April 13. In 1955, Dr. Cobb was Chairman of its Section H (Anthropology).

**Dr. L. G. Lederer,** Medical Director for Capital Airlines, was elected First Vice President and President-elect of the Aero Medical Association at its Annual Meeting in Detroit, May 5–8. Dr. Lederer will take office as President in 1959.

**Dr. Winfred Overholser** was honored, April 23, at the annual dinner meeting of the Washington Institute of Mental Hygiene, held at the Kennedy-Warren. In recognition of his presidency of that organization for 15 years, he was presented with a bound volume tracing the history of the Institute.

Five past directors of the organization discussed its accomplishments at the meeting. They were Drs. Paul J. Ewerhardt, Rex E. Buxton, Sidney Berman, William L. Granatir, and Edwin S. Kessler. All are members of the Medical Society except Dr. Granatir.

**Dr. Donald Stubbs,** President of Medical Service of the District of Columbia and Clinical Professor of Anesthesiology of George Washington University, took part in a Panel on Medical Care Insurance: Its Influence on Medical Service, at the 165th Annual Meeting of the Connecticut State Medical Society in East Hartford, Conn., May 1.

**Dr. Bernard H. Ostrow,** Clinical Instructor in Medicine of George Washington University School of Medicine, was in Portsmouth, Virginia, March 29–30, as visiting consultant in medicine to the Portsmouth Naval Hospital. Dr. Ostrow conducted cardiac rounds and read a paper on "The Detection of Myocardial Infarction by the Serum Transaminase Test."

**Dr. Paul B. Cornely** was moderator **and Dr. Marvin E. Perkins,** panelist, for a Panel Discussion on Mentally Disordered Children during Washington's Eighth Annual Health, Welfare and Recreation Conference. The meeting, sponsored by United Community Services, was held at the Hotel Statler, May 17.

**Dr. Irving Brotman** participated in a Symposium on the Management of Myocardial Infarction, sponsored by the American College of Cardiology at the Waldorf-Astoria Hotel in New York, February 16. Dr. Brotman's contribution to the Symposium was a paper on "Anticoagulant Treatment of Myocardial Infarction—Acute and Long-Term."

**Dr. I. Phillips Frohman** attended the Semi-Centennial Meeting of the Oklahoma State Medical Association in Tulsa, May 6–8, and on May 7 addressed the general session on the subject, "The Physician as Nutritionist."

**Dr. George E. Schreiner,** Assistant Professor of Medicine, Georgetown University School of Medicine, and Director of the Renal Clinic at the University's Hospital, gave a lecture on "Indications and Use of the Artificial Kidney," May 3, in Baltimore, during the 159th Annual Meeting of the Medical and Chirurgical Faculty of the State of Maryland.

**Dr. Charles S. Wise,** Professor of Physical Medicine and Rehabilitation, George Washington University School of Medicine, addressed the Section of Physical Medicine of the Massachusetts State Medical Society, May 22. The speech was given during the 176th Anniversary Meeting of the Society at the Hotel Statler, Boston, May 21–23.

**Dr. Howard M. Payne** was a guest speaker at the 50th Anniversary Meeting of the Indiana Tuberculosis and Health Association, April 30. The subject of his address was "Tuberculosis Control Today."

**Dr. William T. Spence** was in Detroit, April 25–27, to attend a meeting of the Harvey Cushing Society. He presented a paper, representing original research, before the Society, which was entitled, "Transection of the Midbrain—Metabolic Effects."

Following the meeting Dr. Spence went to Rochester, Minnesota, where he was a guest of Dr Alfred Uihlein at the Mayo Clinic for five days.

**Dr. Henry P. Laughlin,** Associate member of the District Medical Society, left Washington, May 17, on a world tour. During his trip he will visit hospitals and psychiatrists at foreign capitals, and he will lecture at several medical schools. He will carry greetings from American medical organizations to medical groups and leading psychiatrists in more than a dozen countries.

His first destination was Korea, which he was visiting as a consultant to the U. S. International Coöperation Administration in charge of a party of trainees and a patient. In Seoul he was to serve as a consultant in psychiatry to the Government of Korea and to lecture at the National University College of Medicine.

Following visits to Tokyo and Taipei, he will fly to Singapore and Djakarta and thence via Thailand, Burma, India and Pakistan to the Middle East, where he will visit Teheran, Bagdad, Beirut, Cairo, and Instanbul. En route home he will stop at Athens, Rome, Madrid, Paris, and Copenhagen, arriving back in the United States on July 7.

Dr. Laughlin is Past President of the Washington Psychiatric Society and the District Branch of the American Psychiatric Association. He is on the teaching staff of George Washington University School of Medicine as Associate Clinical Professor of Psychiatry.

Dr. Laughlin was elected Vice President of the Montgomery County Medical Society at its March meeting. He will take office on January 1, 1958.

**Dr. Ruth Stocking** resigned, May 1, as Director of Children's House after a three-year tenure in office. She was appointed Director in September, 1954. For four years prior she had served the institution as consulting psychiatrist.

Dr. Stocking will engage in private practice and will continue her teaching at Howard University as Instructor in Psychiatry.

**Dr. Edward Y. Davidson** was honored by members of the Medical Society and personal friends at a reception, April 14, at the Eastern Star Home where he now resides. Dr. Davidson celebrated his 96th birthday on April 10. Dr. John A. Reed assisted in arrangements for the reception.

**Dr. Oscar B. Hunter, Jr.,** was one of twelve new directors elected to the Washington Board of Trade for a three-year term early in May.

**Dr. Laurence H. Kyle** attended the meeting of the Technical Advisory Committee of the President's Conference on Occupational Safety, which was held in the auditorium of the United States Department of Labor, April 26. Dr. Kyle represented the Industrial Medical Association at this meeting.

## MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, April 22, 1957, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

### *Active Members*

Thomas F. Cullen, 3520 Legation Street, N.W.
George Glass, District Training School, Laurel, Md.
Forest K. Harris II, 800 New Hampshire Avenue, N.W.
William L. Jamison, 1801 Eye Street, N.W.
Margaret M. Kenrick, 4201 Massachusetts Avenue, N.W.
Joseph M. LoPresti, Children's Hospital
Gerard F. MacDonald, 1801 K Street, N.W.
John T. Murray, Jr., Georgetown University Hospital
Julian S. Sachs, 2122 Massachusetts Avenue, N.W.
Stanley M. Silverberg, 2802 Ninth Street South, Arlington, Va.

### *Associate Members*

Eugene P. Campbell, 4606 Western Avenue, N.W.
Edward J. Richards, 10110 Georgia Avenue, Silver Spring, Md.
Peter A. Santucci, 8218 Wisconsin Avenue, Bethesda 14, Md.
Lewis K. Woodward, Jr., Medical Branch, U. S. Department of State

### *Resident-Intern Members*

Herbert E. Lane, Jr., 2310 South Culpepper Street, Arlington, Va.
Vertis R. Thompson, 526 Kenyon Street, N.W.

## CORRESPONDENCE

Lexington, Va., March 26, 1957

To Mr. Wiprud:

Your article in the March issue of Medical Annals concerning the proper disposition of a deceased physician's clinical records applies equally to the retired or non-active doctor.

Obviously, they should not be released to the patient. Some of the notes and remarks thereon would not set any too well with the party concerned.

The physician who takes over his practice naturally does not want to litter up his own files with a lot of old records which may never be used. The patient who occasionally requests that his card be forwarded to the new doctor is in the minority.

So the question of whether to destroy the records has to be considered. As far as I know the legality of such a method has never been definitely settled. Have we the legal right to burn them? Is it to the best interest of the patient's future to destroy vital statistics of his past medical history and inherited tendencies? When I retired after accumulating the records of forty years of practice my successor was willing to keep those covering the last few years. The rest I brought with me and have them stacked up in the barn. Hardly a month goes by that I do not receive a letter from some anxious mother requesting data on the "shots" I gave her youngster some 15 to 30 years ago or whether or not he had any mental retardation as a child. The Social Security people demanded the latter information. So I feel the facts I am thus able to give them are necessary.

The whole problem is timely and thought-provoking. What do other professions do, such as dentists and lawyers? Could not the Executive Committee come up with an answer?

With best personal regards,
James M. Moser, Sr., M.D.

Observer's Comment: Readers of "In and Out of Focus" (March issue, page 143) will recall that the Observer admitted the situation with respect to deceased physicians' clinical records was far from satisfactory. Among other things, he reported that he had ascertained it was not illegal to destroy such records, but he pointed out their frequent importance to patients. He urged their being placed in the custody of proper and interested persons.

Incidentally, he consulted the Medical Society's legal counsel, who reviewed his comments and approved them.

Dr. Moser's comments are not only interesting, but it is hoped will encourage other readers to express their views on this important subject, offering such suggestions as they believe will be helpful to their colleagues.

Washington, D. C., April 15, 1957

To the Editor:

On behalf of Dr. Edward Y. Davidson, I want to take this opportunity to thank all of the members of the Medical Society for the beautiful centerpiece of flowers sent in celebrating his 96th birthday. Dr. Davidson thought the flowers were beautiful and enjoyed them very much.

The birthday party, held at the Masonic and Eastern Star Home in honor of Dr. Davidson's birthday, was enjoyed by all those who attended and the afternoon was spent with the usual congratulations and refreshments.

Sincerely yours,
James P. Robertson
*Superintendent, The Masonic and Eastern Star Home of the District of Columbia*

## BOOK REVIEWS

**Coronary Heart Disease: Angina Pectoris; Myocardial Infarction.** Milton Plotz, M.D., F.A.C.P., Clinical Associate Professor of Medicine, State University of New York, Medical Center at New York; Physician, Kings County Hospital, Goldwater Memorial Hospital, and Brooklyn State Hospital. Foreword by William Dock, M.D. Price, $12.00. Pp. 353, with 107 illustrations. New York: Hoeber-Harper, 1957.

This textbook covers coronary vascular cardiopathy comprehensively. All phases of the subject, including biologic mechanisms, medicolegal aspects and an intelligent approach to therapy, are considered in a well-organized, up-to-date presentation. Controversial subjects are either avoided or handled with fairness to both sides.

As teaching aids, this reviewer is partial to diagrams and line drawings. This text employs both effectively. It is suggested that in the next printing, the captions below the illustrations be printed across the page rather than in the present 2-column format.

Readers should enjoy the frontispiece portrait of William Heberden and profit by the introductory remarks of the always stimulating "Bill" Dock. The practicing physician, internist and cardiologist would do well to acquire this volume,— and study it.

L. F.

**Manual of Anesthesiology for Residents and Medical Students.** A Monograph in The Bannerstone Division of American Lectures in Anesthesiology. Herman Schwartz, M.D., S. H. Ngai, M.D., and E. M. Papper, M.D. From the Anesthesiology Service, The

Presbyterian Hospital, and Department of Anesthesiology, Columbia University, College of Physicians and Surgeons, New York, New York. Edited by JOHN ADRIANI, M.D., Director, Department of Anesthesia, Charity Hospital, New Orleans, Louisiana. Price, $3.75. Pp. 170. Springfield, Ill.: Thomas, 1957.

This manual was developed as a guide to students, interns and residents on the Anesthesia Service at Columbia-Presbyterian Medical Center. Certainly, if one became familiar with the contents of this manual as well as its excellent references, he would have a fine background in the theory of anesthesia. This manual is not claimed to be a textbook of anesthesiology, but rather a guide to help organize the vast amount of information that must be learned by the student-anesthesiologist as a scientific background to his technical training. Discussion of technical procedures is deliberately avoided, since these are intended to be learned clinically. Included are discussions of the basic sciences, preparation and selection of patients for anesthesia, anesthetic complications, pediatric anesthesia, respiratory and cardiac resuscitation, and an excellent table of normal values.

While this manual will be of value to all interested in anesthesia, its greatest value will be to residents in anesthesia to aid them in keeping their scientific training in pace with their clinical experience.

JOHN J. LEAHY, M.D.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**Gifford's Textbook of Ophthalmology.** FRANCIS HEED ADLER, M. D., William F. Norris and George E. DeSchweinitz Professor of Ophthalmology, University of Pennsylvania Medical School; Consulting Surgeon, Wills Eye Hospital and Children's Hospital of Philadelphia. Price, $8.00. Pp. 499, with 277 figures and 26 color plates. Philadelphia: Saunders, 1957.

**The Treatment of Burns.** CURTIS P. ARTZ, M.D. F.A.C.S., Lt. Col., MC, USA (Ret.), Formerly, Director, Surgical Research Unit, Brooke Army Medical Center, Fort Sam Houston, Texas; Presently, Associate Professor of Surgery, University of Mississippi Medical Center, Jackson, Mississippi; AND ERIC REISS, M.D., American Cancer Society Scholar and Instructor in Medicine, Washington University School of Medicine, St. Louis, Missouri. Price, $7.50. Pp. 250, with 199 illustrations on 105 figures. Illustrations by Burr Bush. Philadelphia: Saunders, 1957.

**Rypins' Medical Licensure Examinations—Topical Summaries and Questions,** 8th edition. WALTER L. BIERRING, M.D., M.A.C.P., M.R.C.P., Edin-(Hon.), Former Member, National Board of Medical Examiners, American Board of Internal Medicine, Iowa State Board of Medical Examiners; Iowa State Commission of Health; Professor Emeritus, Theory and Practice of Medicine; College of Medicine, State University of Iowa; Secretary, Federation of State Medical Boards of the United States; Chairman (Hon.), 1933–53, American Board of Preventive Medicine, Inc.; Director, Division Gerontology, Heart and Chronic Diseases, Iowa State Department of Health. With the collaboration of a Review Panel. Price, $10.00. Pp. 964. Philadelphia: Lippincott, 1957.

**Your Wonderful Body.** PETER PINEO CHASE, M.D. Price, $5.95. Pp. 391, illustrated. New York: Prentice-Hall, Inc., 1957.

## WILLIAM FRANCIS O'DONNELL, M.D., F.A.C.P.

### (1891–1957)

Dr. William F. O'Donnell, well known Washington pediatrician, died April 27, 1957, at his home, 2701 28th Street, N.W., following a long illness.

Dr. O'Donnell was a native Washingtonian, born, November 22, 1891, to William F. and Mary Murphy O'Donnell. He attended the parochial schools in Washington and Mount St. Mary's College in Emmitsburg, Maryland. He graduated from Georgetown University School of Medicine in 1913, interned the following year at Georgetown Hospital, and was resident physician at Columbia Hospital for Women in 1914–15.

An enlistee in the Army Medical Corps during World War I, he was adjutant, with the rank of Captain, at Evacuation Hospital No. 13, serving overseas for 13 months.

Dr. O'Donnell was on the staff of Georgetown University as Instructor in Pediatrics from 1915 to 1922, as Clinical Professor of Pediatrics from 1922 to 1945, and as Professor of Pediatrics from 1945 to 1950, when he became Professor Emeritus. He was

Chief of Pediatrics at Providence Hospital from 1921 to 1953, and chief of the medical staff at the Christ Child Convalescent Home from 1949 to 1953. He was Associate in Pediatrics at Children's Hospital from 1945 to 1952, later serving as consultant in pediatrics. For six years he was attending physician at St. Ann's Infant Asylum, and served Suburban Hospital in the same capacity for five years.

In 1950 he received the Award of Honor of the Georgetown Clinical Society; in 1951 he was awarded the Vicennial Medal by Georgetown University in recognition of his long years of service.

He was a diplomate of the American Board of Pediatrics; Fellow of the American Academy of Pediatrics and the American College of Physicians; and a member of the American Medical Association, the Southern Medical Association, and the Pan-American Medical Society. He became a Life member of the Medical Society of the District of Columbia in 1956.

Dr. O'Donnell was married to the former Gertrude Lane, who died June 6, 1955. A son, the Reverend James J. O'Donnell, Assistant Pastor of St. Peter's Catholic Church in Olney, Maryland, preceded his father in death by a month. Two of his sons, Drs. Vincent L. and Robert J. O'Donnell, are physicians, also graduates of Georgetown Medical School and members of the District Medical Society. He leaves a daughter, Mrs. William A. Rapp, Jr., of Washington, and four other sons: William F. O'Donnell III, of the home address; John J. O'Donnell, of Chevy Chase, Md.; Hugh L. O'Donnell, serving in the U. S. Army; and Paul C. O'Donnell, a student at Georgetown University. He is also survived by two brothers and two sisters; Dr. Paul J. O'Donnell, orthopedic surgeon of Washington, an Active member of the Medical Society; Jeremiah F. O'Donnell, of Mansfield, Ohio; Mrs. John M. Higgins, Sayre, Pa.; and Mrs. Harold Gilmore, Pittsburgh, Pa.

## ANDREW BROWNE EVANS, M.D.

### (1888–1957)

Dr. Andrew Browne Evans, Washington psychiatrist, died suddenly, April 23, 1957, at his home, 5138 Massachusetts Avenue, Westmoreland Hills, Maryland.

Dr. Evans was born, May 4, 1888, at Laneview, Virginia, to William T. and Mary Jesse Evans. He was educated in the public schools of Virginia and attended Virginia Polytechnic Institute. He graduated from Georgetown University School of Medicine in 1922 and interned at Gallinger Municipal Hospital (now D. C. General Hospital). From 1923 to 1926, he was on the staff of St. Elizabeths Hospital as Assistant Physician. He served on the psychiatric staff of Gallinger Hospital from 1926 to 1939, and during this same period he taught psychiatry at Georgetown University.

Dr. Evans was a training and supervising analyst at the Washington Psychoanalytic Institute and a trustee of the William Alanson White Psychiatric Foundation.

He was a member of the American Psychiatric Association, the American Psychoanalytic Association, American Medical Association, the Washington Psychiatric Society, the Washington-Baltimore Psychoanalytic Society, St. Elizabeths Medical Society, and the Hippocrates-Galen Society. He had been an Active member of the Medical Society of the District of Columbia since 1938.

Dr. Evans leaves his wife, Mrs. Mary Noel Evans; a daughter, Mrs. Mary Evans Robinson, of Bethesda, Md.; a son, Andrew B. Evans, of the home address; and a brother, W. Preston Evans, of Washington.

## FRIEDA FROMM-REICHMANN, M.D.

### (1889–1957)

Dr. Frieda Fromm-Reichmann, internationally known psychotherapist, died suddenly in her home at Chestnut Lodge in Rockville, Maryland, April 28, 1957.

Dr. Fromm-Reichmann, who joined the staff of Chestnut Lodge in 1935, had done major research work in the field of schizophrenia and had a worldwide reputation as a psychotherapist, research worker and author in psychiatry. A recent publication was "Principles in Intensive Psychotherapy." She was a prolific writer in the fields of her interest.

Dr. Fromm-Reichmann was a native of Karlsruhe, Baden, Germany, where she was born, October 23, 1889, to Adolf and Clara Simon Reichmann. She received her early education in Koenigsberg, Germany, where she graduated with *Abiturium* in 1907.

She received her medical education at Albertus University Medical School in Koenigsberg and Ruprecht University Medical School in Munich, Germany, graduating from Albertus in 1913.

After years of private practice and work in psychiatric hospitals in Germany, she came to the United States to escape from the Hitler regime of terror. She was first Director of Psychotherapy at Chestnut Lodge, and later, Senior Consultant in Psychotherapy.

In 1952 she won the Adolf Meyer Award for outstanding contributions in the field of psychiatry and was invited to present the academic lecture to the American Psychiatric Association in 1955. She was to have delivered a main address at the Second International Congress for Psychiatry in Zurich, Switzerland, in September.

During 1955–56 she was a Fellow at the Center for Advanced Study in the Behavioral Sciences in Palo Alto, California, a Ford Foundation study center. She was also a teacher at the Washington-Baltimore Psychoanalytic Institute.

She was a Fellow of the American Psychiatric Association, a member of the American Psychoanalytic Association, Past President of the Washington-Baltimore Psychoanalytic Society, and Past Chairman of the faculty of the Washington School of Psychiatry. She was a member of the American Medical Association, the Southern Medical Association, and the Montgomery County Medical Society. Since 1940 she had been an Associate member of the District of Columbia Medical Society.

She was married in 1926 to Dr. Erich Fromm, also an eminent psychoanalyst, from who she was later divorced. She leaves two sisters, Miss Grete Reichmann and Mrs. Anna Jacobson, both of Israel.

In an editorial which appeared in the *Washington Post and Times-Herald* on May 7, she was described as one of Washington's "most distinguished residents." It closed with the following sentence, "At a time when there is wide concern for the plight of the mentally ill, her counsel will be sorely missed."

**Fetal Mortality in Cesarean Section—Piver**

(*Continued from page 292*)

minishing the hazards from the presence of a uterine scar, and finally by delivering patients subjected to section by repeat operation, preferably elective, in subsequent pregnancies.

## SUMMARY

An analysis of cesarean sections was made at a women's hospital for a 12-year period with special regard to fetal mortality and factors involved. The institution of a set routine for all sections, unless departures are unavoidable, has resulted in a 21 per cent decrease in fetal mortality even though the patient load has shown a marked increase in that group particularly prone to complications associated with increased mortality, Negro patients.

ACKNOWLEDGMENT: The author wishes to express his appreciation to Dr. David Kushner, Chief of Staff, and Dr. Allen Widome, Chief of Anesthesia, of Columbia Hospital for Women, for their encouragement and suggestions which helped so much in the writing of this paper. He also wishes to thank Miss Nadine Eichelberger and Miss Mary Lawrence of the Records Department of Columbia Hospital for their assistance in the collection of data for this paper.

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# MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI — *July*, 1957 — NUMBER 7

# ACIDOSIS OF CHRONIC RENAL FAILURE*

E. LOVELL BECKER, M.D.†

*Assistant Professor of Medicine, Medical College of Virginia, Richmond*

ALLAN M. UNGER, M.D.

*Resident in Medicine, Medical College of Virginia Hospital Division*

WITH FEW EXCEPTIONS, patients with renal insufficiency and nitrogen retention have some degree of acidosis. The severity may vary from acidosis clinically evidenced by Kussmaul breathing to that detected only by laboratory procedures. As early as 1888 von Jaksch[1] noted that there was a decreased titratable alkalinity of the blood in the clinical state of uremia. It was not until sometime later (1912) that Straub and Schlayer[2] working in Germany found low carbon dioxide in the alveolar air. Peabody[3] confirmed their findings in 1915.

It has been observed that on a normal diet the end-products of metabolism are acid, and with a state of chronic renal insufficiency there will be a state of acidosis. The pathogenesis of renal acidosis is not completely elucidated. It is partly due to the inability of the kidney to excrete the acid end-products of metabolism and partly the inability of the kidney to change the alkaline glomerular filtrate to an acid urine.

There are 2 types of end-products, the labile acids which exist primarily in the undissociated form at the pH of body fluids and the fixed acids. Carbonic acid which is excreted by the lungs is an example of the former, and sulfates ($SO_4^=$) and phosphates ($PO_4^\equiv$) are examples of the latter. On an average protein diet, approximately 40 to 80 mEq. of acid are excreted as titratable acidity per day; of this, most is excreted as the mineral acids of phosphate and sulfate from protein metabolism.

In the normal urine there are 4 primary acid acceptors. They are bicarbonate, phosphate, the anions of weak organic acids, and ammonia.

The bicarbonate enters the tubular urine by glomerular filtration and accepts hydrogen ions, forming carbonic acid, or $H_2CO_3$. This acid is in turn decomposed to carbon dioxide and $H_2O$ as the pH of the urine falls and the $CO_2$ is reabsorbed. Further, sodium in the tubular urine is exchanged for hydrogen ions, and the net result is a reabsorption of sodium bicarbonate.

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* Presented at the Sixth Midwinter Seminar of the Medical Society of the District of Columbia in Washington, D. C., February 20, 1957.

† Scholar in the medical sciences of the John and Mary R. Markle Foundation.

The second acid acceptor, $HPO_4^=$, is filtered at the glomerulus and combines with hydrogen ions to form acid phosphate, or $H_2PO_4^-$, and this product may be reabsorbed or excreted by the kidney in the urine, and induces an increase in urinary titratable acidity.

The third group of acceptors are the anions of weak organic acids which are also filtered at the glomerulus. They combine with hydrogen ions and are excreted in the urine, and further contribute to the titratable acidity.

The fourth, and probably the most important cation excreted to account for titratable acidity, is ammonium $NH_4^+$. Ammonia ($NH_3$) is derived from tubular synthesis in the kidney and combines with hydrogen ion to the extent that approximately 60 per cent of the hydrogen is bound in this form. This is excreted into the urine, and as a result conserves fixed cations (sodium and potassium).

These mechanisms are schematically presented in figure 1.[4]

These are the general methods whereby the kidney is able to handle the acid load. In chronic renal acidosis the situation is different. First, because of a decrease in glomerular filtration rate there is retention of inorganic anions, primarily phosphate and sulfate. However, Peters[5] pointed out that serum phosphate increase was quantitatively only a minor factor in acidosis. In 1927 Loeb and Benedict[6] reported that inorganic blood sulfates were probably more important and paralleled a rise in nonprotein nitrogen. The inorganic blood sulfate can rise as high as 20 times the normal level in chronic renal acidosis.[7] The normal blood level in man is in the range of 2.4 to 5 mg. per cent, or approximately 1 mEq./L.[8] Wakefield[9] did not believe that there was a strong correlation between urea, creatinine, and sulfate except at urea levels above 100 mg. per cent. However, more recently it has been shown that probably sulfate parallels other clinical tests of uremia.[10, 11]

The next derangement, and probably more important, is decreased ammonia production by the kidney. It has been shown by Gamble and his associates[12] that in normal individuals there is an increase in urinary ammonium in response to acid-producing salts, and this response is inefficient in patients with renal insufficiency.

A third derangement in chronic renal acidosis is diminished tubular excretion of hydrogen ions. The kidney is unable in renal insufficiency to form a urine of hydrogen ion concentration as high as that found in normals. The work of Pitts[13] showed that the hydrogen ion is formed by the tubular cells and accounts for a large part of the acidity of the urine. If there is tubular damage and hydrogen is not available, there will be a loss of fixed base which normally would have been exchanged for hydrogen ions.

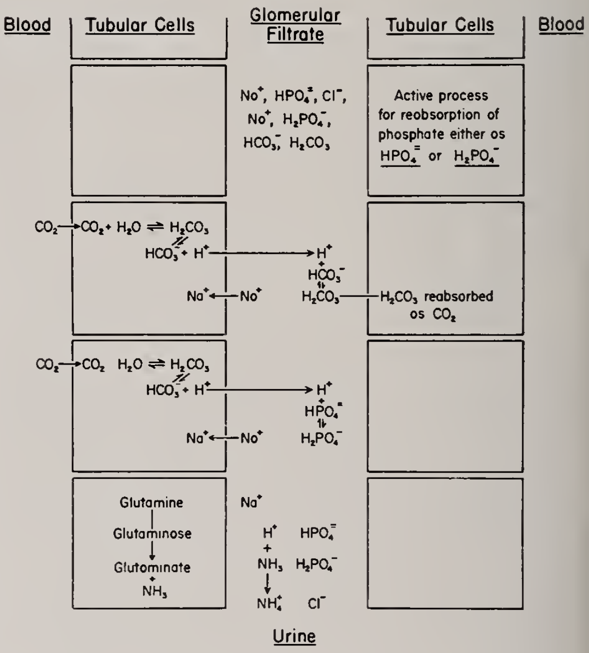
Blood
Tubular Cells
Glomerular Filtrate
Tubular Cells
Blood
$Na^+, HPO_4^=, Cl^-,$
$Na^+, H_2PO_4^-,$
$HCO_3^-, H_2CO_3$
Active process for reabsorption of phosphate either as $HPO_4^=$ or $H_2PO_4^-$
$CO_2 \rightarrow CO_2 + H_2O \rightleftharpoons H_2CO_3$
$HCO_3^- + H^+ \rightarrow H^+$
$+ HCO_3^- \rightleftharpoons H_2CO_3$
$Na^+ \leftarrow Na^+$
$H_2CO_3$ reabsorbed as $CO_2$
$CO_2 \rightarrow CO_2\ H_2O \rightleftharpoons H_2CO_3$
$HCO_3^- + H^+ \rightarrow H^+$
$+ HPO_4^= \rightleftharpoons H_2PO_4^-$
$Na^+ \leftarrow Na^+$
Glutamine
Glutaminose
Glutaminate
$+ NH_3$
$Na^+$
$H^+ + NH_3 \rightarrow NH_4^+$
$HPO_4^=$
$H_2PO_4^-$
$Cl^-$
Urine

Fig. 1. Renal mechanisms for excreting an acid load.[4]

The last general alteration is the retention of organic acids in the blood. Briggs[14] pointed out that in patients with nitrogen retention the difference between total known acids and bases left little for retained organic acids, about 4 to 5 mEq./L. However, in far-advanced uremia there is starvation with an increase in ketonic acids. In terminal uremia there may be a value as high as

100 millimols of ether-soluble acids per liter of plasma.[15]

### THERAPY OF CHRONIC RENAL ACIDOSIS

The diet should be carefully controlled, since it is an important aspect in the management of patients with chronic renal acidosis. It has been accepted that 0.5 to 0.75 Gm. of protein per kilo of body weight is satisfactory for those patients with no symptoms or marked signs of renal insufficiency. However, in the more advanced cases protein must be restricted. This restriction is necessary since the body is unable to excrete adequately the end-products of protein metabolism. However, adequate protein and caloric intake must be maintained to prevent the patient from breaking down his own body stores. Any dietary excesses will lead to further chemical decompensation; however, the patient who can excrete some titratable acidity should not be unduly deprived of protein. The patient on a low-protein intake, as for instance 20 grams per day, will initially have a negative nitrogen balance, but nitrogen losses will tend to diminish if there are adequate carbohydrates and fat in the daily diet. The decrease in protein intake will reduce the toxic products of metabolism and diminish phosphate and sulfate accumulation. To supplement the diet, many preparations are available which contain such substances as peanut oil, glucose, high fat, and little protein. But, in general, the patient should be encouraged to take a calorically adequate diet, and these calories can be conveniently obtained from such foods as sweetened pastries, peanut butter, and candies.

Another important aspect of the management of the patient is daily rest. Inasmuch as glomerular filtration rate and renal blood flow fall in normal individuals in the erect position, it would be advisable to have patients with chronic renal acidosis rest in the recumbent position in order to increase these moieties.

The problems of electrolyte regulation are most adequately handled as they arise. In general, a normal electrolyte pattern cannot be maintained, but it is necessary to accept the optimal pattern for a particular patient with altered renal physiology. It is important to treat the whole patient and not the laboratory reports.

Rigid restriction of sodium intake is dangerous, since it can lead to a further decrease in glomerular filtration rate with consequent aggravation of the uremic state. If there is less than 3 to 4 grams per day of sodium, the patient may develop a more severe acidosis because of the sodium depletion. Any excess of sodium will give rise to edema, and this, among other things, is due to a decrease in the glomerular filtration. Obviously, if edema develops, sodium restriction is indicated, and if acidosis becomes marked, sodium chloride should be restricted and sodium bicarbonate given. However, moderate acidosis is not harmful to the patient. Sodium bicarbonate or sodium lactate in acidosis is important, but the actual significance of chloride and bicarbonate in the management is uncertain. However, it is impossible to correct anion deficiencies without adding cation. Many patients with chronic renal acidosis can accept alkali supplement in the form of sodium or potassium, bicarbonate, lactate or acetate. This largely relieves the kidney of the necessity of acid excretion.

In most cases of chronic renal insufficiency the potassium level in the blood is normal. If it is low and there is adequate urinary output, then potassium can be given orally. If serum potassium concentration is elevated with renal failure, exchangeable potassium is reduced.[16]

The chloride ion is usually low and inorganic sulfate and phosphate are high in the plasma. The urea level in the plasma is high, but this apparently is a harmless substance, whereas an accumulation of phosphate may have deleterious effects. Hyperphosphatemia and secondary hypocalcemia may cause tetany and play a part in producing bony lesions in chronic renal insufficiency by stimulating the parathyroid glands.

Patients with kidney disease are unable to excrete a concentrated urine; therefore, adequate water is necessary to excrete the solute load. In water excess with hyponatremia the restriction of water is indicated. In acute or terminal uremia, or in anuric states, the water intake must be reduced.

The normochromic, normocytic anemia associated with chronic renal insufficiency is refractory to most forms of therapy. However, whole blood transfusions are frequently of benefit to the patient. Further, cardiac decompensation should receive careful attention.

## SUMMARY

The management of renal acidosis can be divided into several parts.

1. Diet regulation.
2. The treatment of electrolyte imbalances as they occur and the maintenance of a patient at optimal conditions, but not necessarily normal electrolyte balance.
3. The control of the underlying renal disease and attention to adequate rest and therapy of anemia and heart failure.

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# THE TREATMENT OF EMPHYSEMA*

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IT IS A REFLECTION both of our ignorance concerning the basic lesion of emphysema and our unquenchable zeal in treating this disease that many patients have had thoracoplasties performed after lung resections in order to prevent compensatory "emphysema" of the remaining lung. There has been little evidence to show that stretched lung becomes emphysematous; evidence to the contrary has been provided by several investigations, such as that of Friend[1] who studied 15 patients before and after pneumonectomy. He observed an increase in volume of the remaining lung, but the overinflation did not progress beyond 3 months after the operation. Ventilatory function studies showed no evidence of progressive loss of function, and hence there appears to be no need to prevent or correct the overinflation.

If emphysema is more than just an overinflated lung, how shall we define it? Few are aware that there is no firmly established or generally accepted definition of the disease. In most disorders the pathologist's definition is the ultimate canon; but at the necropsy table the inelastic distended lungs of obstructive and senile emphysema look much alike. The bronchiolar edema and spasm which are characteristic of chronic obstructive emphysema are not impressive on microscopic study, and the pathologist may see relatively little difference between the lung of a patient who had relentless dyspnea and the lung of some barrel-chested septuagenarian with an excellent exercise tolerance. The radiologist has the same difficulty; neither by the configuration of the chest, the radiability of the lung fields, or the configuration or motion of the diaphragms, can he estimate accurately the functional ability of the lungs.

It should be emphasized that the respiratory physiologist cannot provide a definition for this disease. Although there is theoretically a pattern characteristic of obstructive emphysema, patients with advanced emphysema actually show abnormalities in almost all tests, and no pattern of impaired function can be distinguished which is specifically diagnostic of emphysema. The increased ratio of residual to total lung capacity which was reported a few years ago to be the only accurate indication of emphysema is found to be as abnormal in the asymptomatic patient with senile emphysema as in the disabled patient with obstructive emphysema. The two major physiologic defects in advanced emphysema are in ventilation and in diffusion, the one reflecting bronchial obstruction and lost elasticity, the other stretched or torn alveolar septa and an obliterated vascular bed. As Shepard and his associates[2] have pointed out, there are often discrepancies between the estimates of severity by clinicians, whose evaluation is based largely on manifestations of airway obstruction, and the pathologist, whose evaluation is based on the extent of disintegration of the alveolar walls.

Actually the test which by and large best reflects the severity of emphysema is the relatively crude and subjective measurement of maximum breathing capacity, which brings us back to the homely truth that the best index of emphysema is difficulty in breathing on exertion. One of the most authoritative of recent English physiologic studies, by Bates, Knott and Christie,[3] is based on the following clinical definition of emphysema: a history of increasing breathlessness on effort, constantly present in both winter and summer, with no other cause for dyspnea demonstrable.

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* Presented at the Sixth Midwinter Seminar of the Medical Society of the District of Columbia in Washington, D. C., February 21, 1957.

## DIAGNOSIS

In spite of the problems of definition which we have discussed, one look suffices for the diagnosis in many cases with advanced disease. It is easy to recognize the dyspneic patient, with a slightly cyanotic appearance and a barrel-chest, as being emphysematous, and the diagnosis is firmly established if the patient describes the onset of persistent breathlessness after the age of 40, and notes that the symptoms are not episodic or seasonal, but constant and progressive. On auscultation, breath sounds are diminished; rales indicative of bronchitis may or may not be present. Of special importance is examination for evidence of cor pulmonale or other types of heart disease.

Roentgenographic study is chiefly important in demonstrating impairment of diaphragmatic motion and in excluding other causes of dyspnea as well as complications of emphysema such as pneumothorax and pneumonia.

Respiratory function tests should characteristically show evidence of marked ventilatory disturbance, with impaired distribution. The residual capacity is increased. In the later stages diminished diffusing capacity occurs as the result of torn alveoli and an obliterated vascular bed. Anoxemia is rarely extreme, and secondary polycythemia is rather uncommon.

The physiologic disturbances toward which therapy is directed include infection, bronchospasm, viscid secretions, anoxemia, pulmonary hypertension, and finally, congestive failure. The disrupted alveoli, the loss of elasticity, and the obliterated vascular bed are not at present susceptible of treatment. For this reason the results of therapy of emphysema are somewhat less than dramatic. In any disease in which the results of treatment are meager, special emphasis should be given prevention.

A relatively small proportion of emphysema is due to asthma and to injury from fumes. Idiopathic emphysema is rarely if ever observed in a non-smoker. It is probable that a reduction in cigarette consumption would diminish the frequency of emphysema, but this has not been proven.

## TREATMENT OF CHRONIC EMPHYSEMA

The detailed consideration of the many therapeutic agents which are commonly employed for emphysema is for the most part a melancholy account. Therapeutic nihilism is not in order, however, for several reasons. First, it should be appreciated that even a modest improvement in respiratory function of the patient with advanced emphysema may suffice to lift the patient from invalidism to employability. Second, although not often a major factor in the disability of chronic emphysema, infection is almost a universal accompaniment of emphysema, and the availability of antibiotics has significantly increased longevity in this disease. Finally, it should be emphasized that there are two situations in which the results of vigorous therapy are rewarding, namely, in acute respiratory acidosis and in instances of isolated bullae susceptible of surgical treatment.

*Measures directed at infection.* Oral administration of antibiotics has largely replaced the parenteral and aerosol use of these agents by reason of greater safety and equal effectiveness.

There is no unanimity concerning the schedule of antibiotic administration. We have been impressed by the value of year-round use of low doses of penicillin employing schedules similar to those given for rheumatic fever prophylaxis; others advocate the use of antibiotics only when the appearance of colored or purulent sputum signals the development of bacterial infection.

Penicillin is the antibiotic of choice unless there is a history of allergic reactions to this agent. Infection not responding to penicillin should be treated with other antibiotics, but it should be recognized that many if not most drug-resistant respiratory infections are actually viral. There appears at present to be no indication for vaccine therapy.

*Measures directed at bronchospasm.* Bronchospasm is another feature which is a constant but sometimes a minor accompaniment of emphysema. Bronchodilators represent an important part of the treatment of this disease. Ephedrine and Orthoxine are useful, convenient and well tolerated agents. Aminophyllin and related drugs usually prove irritating when taken orally in effective doses. The use of cortisone and its derivatives for their bronchodilator effects is open to serious objections. A recent report of a controlled study by the Medical Research Council in Great Britain indicates that the steroids have proven of questionable value in chronic asthma. The benefits to be derived in emphysema are even fewer, and the hazards of prolonged steroid therapy as great. There is an extraordinarily high frequency of peptic ulcer in patients with emphysema, and the use of steroids represents an extra hazard on this account.

The administration of nebulized Isuprel or epinephrine is less valuable in emphysema than in asthma. The benefits of intermittent positive pressure breathing appear to be largely due to the nebulized bronchodilator which is administered.[4] A few patients find this apparatus consistently helpful; the benefits do not warrant the expense in most instances.

The most important measure for relief of bronchospasm is the cessation of cigarette smoking. Patients with emphysema find this more difficult to accomplish than any other group with which I am familiar. Many patients with emphysema insist that smoking helps them expectorate. It is probable that their greater tenacity in persisting with smoking merely reflects the fact that emphysema is most common among those most strongly addicted to cigarettes.

*Measures directed at improving diaphragmatic efficiency.* Very few patients have secured relief from abdominal belts or pneumoperitoneum, and these methods have fallen into disuse. Breathing exercises have received growing attention in recent years, and physiologic studies have indicated significant improvement in function following their use. Most patients with emphysema, however, are past middle age, and retraining of their breathing habits is not readily accomplished. Moreover, in many patients with inelastic advanced emphysematous lungs diaphragmatic breathing seems impossible.

*Measures directed at tenacious secretions.* Viscid sputum is a common and severe complaint of patients with emphysema. An effective expectorant would be of considerable symptomatic benefit. Older agents such as iodides and ammonium chloride are not of great value. The detergents and the various enzymatic agents which have received much attention recently have unfortunately proven irritating to the bronchial mucosa. An effective liquefying agent which is not irritating has not yet been made available.

*Measures directed at anoxia.* Oxygen therapy is inadvisable in chronic emphysema. Severe anoxemia is not a common feature in this disease except during episodes of acute insufficiency and acidosis. Carbon dioxide retention no longer serves as a respiratory stimulus in patients with chronic respiratory acidosis; these patients are responsive only to the stimulus of anoxia, and if this is corrected by administration of oxygen, apnea and coma may ensue. Oxygen therapy is indicated, therefore, only in acute emergencies, and it should be administered by mechanical respirators which will ensure continued respiration despite correction of anoxemia.

*Measures directed at lessening tissue needs for oxygen.* The use of radioactive iodine to provoke myxedema for symptomatic relief of intractable angina pectoris has led to a similar approach to emphysema. By lessening the tissue demand for oxygen it was hoped that symptomatic benefit could be obtained without any improvement in respiratory function itself. The effectiveness of this method of treatment is difficult to measure, since no improvement is anticipated in objective performance; the results have not, in my estimation, been impressive.

*Measures directed at congestive failure.* When congestive failure develops as the result of pulmonary hypertension or from coincidental heart disease of other etiology, striking benefit can often be obtained from the use of digitalis and diuretics. Venesection is indicated if the hematocrit exceeds 60 per cent. The value of Diamox in patients with emphysema appears to rest entirely upon its diuretic effects.

*Measures directed at polycythemia.* Secondary polycythemia is an infrequent accompaniment of advanced emphysema and is ordinarily regarded as a beneficial mechanism. It should be recognized that it may be very difficult to distinguish secondary polycythemia and polycythemia vera. I recently treated a patient who had emphysema and polycythemia vera. The very striking improvement in respiratory function which resulted from correction of the polycythemia by radioactive phosphorus indicates the wisdom of searching for incidental polycythemia vera.

*Measures directed at acidosis.* Tissue utilization of oxygen is improved in the presence of acidosis; and hence respiratory acidosis should be combated not by neutralization, but only by correction of the ventilatory disturbances responsible for the acidosis.

## TREATMENT OF ACUTE RESPIRATORY ACIDOSIS

Vigorous therapy is indicated for the episodes of acute respiratory acidosis which are as a rule initiated by viral or bacterial infections. Intensive application of antibiotics, bronchodilators, and oxygen by mechanical respirators will often achieve remarkable success in controlling the acute illness.[5]

Antibiotic therapy should employ aqueous crystalline penicillin and streptomycin or other antibiotics if penicillin-resistant organisms are suspected or demonstrated.

Bronchodilator effects should be secured by use of intravenous ACTH or hydrocortisone, by use of nebulized Isuprel for 5 minutes every hour, and by intravenous and rectal administration of aminophyllin.

Oxygen should be given, but the following precautions should be observed in order to prevent carbon dioxide narcosis. Oxygen may safely be administered by intermittent positive pressure apparatus or to a patient in a tank respirator. If such apparatus is not available oxygen should be given by catheter rather than mask, in concentrations of less than 40 per cent, interrupting as long as possible after each hour of use. The use of helium-oxygen mixtures is rarely indicated.

The treatment of associated congestive failure should include rapid digitalization, venesection and the use of diuretics.

Sedatives and narcotics must not be employed except when mechanical respirators are being utilized.

## SURGICAL TREATMENT OF EMPHYSEMA

Attempts at surgical treatment of generalized emphysema have not been promising, but excellent results have been obtained in patients with localized bullae. Unfortunately, the bullous changes are sometimes a manifestation of generalized emphysema, and in these instances surgery results in little objective improvement. It is evident from recent studies[6,7] that the selection of patients for surgery presents difficulties even when detailed respiratory function tests are employed in an effort to demonstrate generalized emphysema. There can be little question concerning the wisdom of surgical intervention in patients whose exercise tolerance is diminishing, whose bullae are expanding, or who have been acutely dyspneic because of the development of a spontaneous pneumothorax or a pneumonia. In these circumstances surgical treatment is unlikely to diminish exercise tolerance and will probably achieve substantial improvement. Although most surgeons favor excision of bullae, utilizing segmental resection

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# GASTRIC AND DUODENAL DIVERTICULA*

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GASTRIC and duodenal diverticula, unlike those of the colon, are comparatively rare lesions. Also, until recent years these lesions have not carried the surgical implications that arose with diverticula of the colon.

The incidence of diverticula of the alimentary tract cannot be determined, since most of them remain asymptomatic throughout life. However, the incidence of true gastric diverticula as reported in several large series is quoted as 0.5 per cent of the total gastrointestinal X-ray examinations. Duodenal diverticula occur more frequently and are estimated to occur in 2 per cent of gastrointestinal examinations.[1]

Etiologically and anatomically there are several subgroups of gastric and duodenal diverticula, but the conventional classification divides them into the true and probably congenital type, characterized in part by retention in the pouch of all the usual layers of the gastrointestinal wall, and the false or acquired type which develops secondarily to extrinsic traction or intrinsic pulsion, usually with consequent loss of the muscular layer. Gastric diverticula usually occur in the cardia of the stomach near the lesser curvature, although they have been reported in the prepyloric region. Duodenal diverticula are usually found arising from the concave surface of the second portion of the duodenum near the ampulla of Vater and in close relationship to the head of the pancreas. However, they may occur near the ligament of Treitz.

The symptoms and signs of diverticulum of the stomach or duodenum are not characteristic, and the diagnosis cannot be made without the aid of X-ray examination and/or gastroscopy. The differential diagnosis from a radiologic point of view is made by the anatomic location of the diverticula and the absence of abnormal mucosal patterns. Usually these lesions are asymptomatic. When symptoms occur they may be described as epigastric pain, dyspepsias, vomiting, hematemesis or tarry stools, or acute abdominal catastrophies. However, in 30 per cent of the reported cases other pathologic conditions were also present which could account for the symptom-complex. Clinically, then, it is difficult to assign these broad symptom-complexes to a solitary gastric or duodenal diverticulum, especially when there is coëxisting disease. Aid along this line may be found in the size of the lesion, the retention present, and the size of the diverticular neck. With large diverticula which have prolonged barium retention it has been shown that mechanical irritation of the mucosa is always present and ulceration or inflammation frequent.

Both the methods and results of treatment are rather difficult to appraise because of the frequent coëxistence of other upper abdominal disease and in some cases a question of the actual symptomatic significance of the treated diverticulum. The general feeling has been that the decision as to surgical amputation must depend wholly on the degree of past disability with little regard to future potentialities. There have been no cases of fatal hemorrhage or carcinomatous change in these diverticula. Surgical indications are any symptoms which are severe enough to require constant medical therapy to alleviate them or symptoms which do not respond to a medical regimen. Surgery is not indicated in the asymptomatic lesions.

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Once the surgical indications have been reached, the location of the incision and the operative technic are important.

In Palmer's series[2] of 131 cases of gastric diverticula which required surgery, diverticula were not found in 8, and in 6 cases the diverticula were found but could not be approached surgically. It is for this reason that Seaman[3] and Ferguson and Cameron[4] advocate the thoracic or abdominothoracic approach. Using these incisions the cardia of the stomach can be visualized well and the left gastric artery controlled if necessary. Also, if difficulty is encountered in locating the diverticulum the stomach can be inflated with air via a Levine tube or the stomach opened and the diverticulum demonstrated with the finger. Either of these procedures would hinder the surgical exposure if the abdominal approach was used. Once the diverticulum is exposed and dissected free, simple amputation and closure is all that is required.

With duodenal diverticula the chief deterrent to surgical treatment has been the hazard of the operation. There seems to be general agreement that for diverticula of the first and second portions of the duodenum the approach should be from the lateral or right side of the duodenum. After division of the posterior peritoneal reflection the duodenum should be rolled to the left and, as a rule, the diverticulum can then be freed from the pancreatic tissue by sharp and blunt dissection. Since the wall of the diverticulum is usually thin, this dissection must be done with care. At times the diverticulum may be difficult to find. In such situations it is helpful to distend the duodenum with air by means of a 20-gauge needle. In certain cases the dissection can be facilitated by opening the duodenum and inserting a finger into the diverticulum. The dissection can then be carried out over the finger as one might dissect a hernia sac. In the second portion of the duodenum the chief danger of the operation is possible injury to the common bile duct. For that reason a number of surgeons believe that it may be advisable in certain difficult cases to expose and open the common duct and pass a catheter through it so that it can be more easily recognized. Pearse[5] has suggested the following technic for the purpose of averting injury to the common duct: "The diverticulum is exposed in the usual manner, by rolling the duodenum to the left. Since injury to the common duct is more likely to occur when the neck of the sac is clamped and divided, he recommends that instead of placing a clamp across the neck of the sac the diverticulum be deliberately incised from its apex to within 0.5 cm. of the neck. Inspection of the neck and the interior of the duodenum can then be carried out, with the use of a probe in the common duct if necessary. When the surgeon is sure that the common duct and ampulla are not encroached upon, the excess portion of the sac is excised and the neck is inverted with sutures."

Most surgeons advocate amputation of the diverticulum. However, Ferguson[4] advocates inversion of the entire diverticulum into the bowel without excision and cites 8 cases in which this method was used with excellent results. He also advises that the patient be given a few swallows of barium some hours before operation and states that the white barium thus accumulated in the diverticulum aids in its recognition and thereby facilitates the dissection.

The excision of diverticula of the third and fourth parts of the duodenum presents no particular problem except adequate exposure. This exposure may be obtained either by dividing the mesocolon and retracting the superior mesenteric vessels to the left, or by dividing the gastrocolic omentum and approaching the diverticulum via the lesser omental sac.

## Illustrative Cases

**Case 1.** A 62-year-old white man was admitted to the medical service with a 5 months' history of dull, aching, epigastric pain and moderate tenderness on pressure. A month prior to admission he experienced severe epigastric cramps. A week prior to admission he developed occasional vomiting episodes and loss of appetite. Eating made the pain worse but gave relief after several hours. He had loss of 30 pounds weight. Physical and laboratory examinations were not remarkable. Upper gastrointestinal X-ray examination revealed a lesion in the antrum of the stomach. He was transferred to the surgical service with a diagnosis of carcinoma of the stomach. Repeated X-ray examinations prior to operation, however, revealed the lesion to be a diverticulum of the third portion of the duodenum. This was excised and the patient became asymptomatic. Pathologic examination of the diverticulum showed chronic duodenitis.

**Case 2.** A 42-year-old colored man was admitted to the medical service complaining of epigastric pain following meals, weight loss, cough and hemoptysis. Chest X-ray films revealed far advanced pulmonary tuberculosis. He was then transferred to the pulmonary service where he was placed on antituberculous therapy. However, he continued to complain of epigastric distress and dyspepsia. Upper gastrointestinal X-ray examination revealed a large diverticulum of the cardia of the stomach. No other lesion could be demonstrated. He was placed on a Sippy diet with little relief of the symptoms. However, he found that by lying prone for a short period following meals he could completely relieve the symptoms. After control of the pulmonary condition simple amputation of the diverticulum was performed. No other lesion was found in or around the stomach. Postoperatively he did well. His symptoms improved but were not completely alleviated. Pathologic sections revealed a congenital diverticulum with evidence of inflammation.

## SUMMARY

Gastric and duodenal diverticula are not common. They require excision only when the evidence indicates that the diverticulum causes distressing symptoms. Then simple excision is sufficient. Some surgical technics are more satisfactory than others. A case of gastric diverticulum and one of duodenal diverticulum have been described to illustrate the problems.

For further information on this subject the reader is furnished references 6–10.

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# POTENTIAL DANGERS FROM THE USE OF TOPICAL HYDROCORTISONE PREPARATIONS*

## Report of an Illustrative Case

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WITH THE INCREASED topical usage of hydrocortisone and related preparations, and with the recent attempts of some drug companies to get the Food and Drug Administration to release ointment and lotion forms of cortisone products from prescription items to over-the-counter sales,[1, 2] it is important for the physician to be aware of the possible dangers of indiscriminate usage of these preparations.

Most of the recent studies show that there is no systemic effect from topical hydrocortisone applications.[3, 4, 5] This is undoubtedly true most of the time, although there are some recent reports of systemic effects from the topical usage of fluorocortisone, which is 10 times more effective than hydrocortisone and has a much greater effect on the electrolytes.[3] In addition to the usual lack of systemic absorption of topical hydrocortisone, there are several additional safeguards to the abuse of these preparations. In the first place, the cost of hydrocortisone usually prevents excessive use in most cases, and in the second place the effectiveness of this drug in many skin diseases causes the temporary healing and reduction of the inflammation of the skin and thus slows down the possible rate of topical absorption. The methods used to test for systemic effects of topical cortisone are[4]:

1. Testing for a reduction of circulating eosinophiles.
2. Testing for a reduction of the 17-ketosteroids in the urine.
3. Checking for evidence of clinical changes, including weight gain, edema, bodily changes and various electrolyte changes.

By all of these methods, both in experimental tests as well as in actual cases of skin diseases, topical hydrocortisone does not appear to show any systemic effect.[4, 5] The case described below is an apparent exception to the rule and illustrates the need for careful observation and follow-up in the use of any potent medication.

### REPORT OF A CASE

The patient (R. J.) was an 11-month-old baby boy who weighed 21 lbs., 5 ounces and was 30 inches tall. He came from an allergic family background, and was an allergic problem since birth, with generalized eczema, gastrointestinal upsets, and frequent "colds." He was a bottle-fed baby and had been on a soybean milk substitute since the age of 6 weeks. He reacted violently to several foods, including cow's milk, orange juice, and eggs. There were questionable reactions to a number of other foods and vitamin preparations. He reacted to many of the common drugs with a rash, excessive stimulation, and a bizarre type of behavior. These reactions occurred to aspirin, phenobarbital, and many of the other barbiturates, some of the "mycins," and reserpine. The only medication he appeared to tolerate relatively well was Elixir of Benadryl, which was being used continually as a mild sedative.

The physical examination revealed a well-developed male infant who was restless, hyperactive and scratching. There was a severe atopic eczema of the face, neck, arms and legs. These lesions were weeping and covered with excoriations. The rest of the skin, even where not broken out, was quite hyperemic. The nasal mucosa was edematous and almost completely obstructive, and there was a clear, watery, profuse nasal discharge. The chest was clear, in spite of an irritative cough. This patient was first seen on December 14, 1955; and because of the extent of the dermatitis, the mother was given a prescription for a 15 c.c. bottle of 1 per cent hydrocortisone lotion, which was to be used on the skin several times a day. In accordance with my usual custom, this prescription was limited to 2 refills.

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* Presented in part before the Jacobi Medical Society in Washington, D. C., January 14, 1957.

When the patient was next seen on December 20, 6 days later, the skin lesions were much improved. There were very few scratch marks, no further weeping, and much less erythema. The mother complained, however, that the druggist would not refill the prescription any more, since she had used 3 15 c.c. bottles of hydrocortisone lotion in 6 days. The mother stated that she did not mind the cost of the drug, since she was having her family and friends visiting during the Christmas holiday and wanted her child to look "normal." Were it not for our prescription laws, I would never have known how much of the drug she was actually using.

The changes produced during these 6 days were remarkable. The skin was considerably improved, but this was to be expected. However, there were other changes not anticipated. In the first place, there was a distinct personality change—from a restless, irritable, poorly sleeping baby to a relaxed, happy and contented child. This might be explained on the basis of the reduction of the skin irritation, but I do not feel this was the entire answer. There was also a marked change in the nasal membranes. The nasal blockage, edema, discharge and coughing were about 90 per cent improved, and these changes were noted as well by the mother. In addition, many of the gastric symptoms were reduced, particularly the colic, and there was increased appetite with a diet that previously appeared to be upsetting. I can explain the relief of the respiratory and gastric symptoms as well as some of the personality changes only on the basis of systemic action from a topically applied drug.

Since it seemed that there was a systemic effect from the large amount of the hydrocortisone lotion, I stopped this preparation and substituted a plain nonmedicated lotion. Within a week the skin became a little more red and weeping, but the personality change, the nasal symptoms and the gastric upsets returned to their previous state.

Calculating that the 1 per cent hydrocortisone lotion contained 150 mg. of hydrocortisone per 15 c.c. bottle, the 3 bottles used in 6 days thus contained 450 mg. of hydrocortisone, or about 75 mg. of the drug was applied per day. To get an estimate of the relative amount that was being absorbed from the skin, I attempted to reduplicate the same degree of relief with an oral dose of hydrocortisone. The least amount of oral drug required to produce the same amount of symptomatic improvement in the respiratory and gastrointestinal symptoms and personality changes was about a total of 5 to 10 mg. of hydrocortisone per day. Thus, about 5 to 10 mg. of hydrocortisone was being absorbed per day from the total of 75 mg. applied to the skin. This would be about 6 to 12 per cent being absorbed. In fact, some of the newer studies with radioactive hydrocortisone labeled with $C_{14}$ revealed at a recent hearing at the Food and Drug Administration show that from 5 to 15 per cent of hydrocortisone can be absorbed from the skin in some cases.[1, 2] In view of the raw skin surfaces, as well as the great extent of the baby's skin involved, plus the efficiency of the lotion base for skin absorption, and the mother's zeal in rubbing the medicine into the skin, I feel it is not unlikely that 5 to 10 mg. of hydrocortisone was absorbed each day from the 75 mg. or more applied to the skin, for which conclusion the clinical evidence seems unrefutable.

In conclusion, while this case illustrates a rare side-effect from the use of topical hydrocortisone, namely, systemic absorption, and while there were only beneficial effects from the absorption of the drug, the potential dangers of unrecognized, prolonged absorption of this potent drug remain. There are, in addition, more frequent and usual side-effects from the use of topical hydrocortisone preparations to be considered, including bacterial infections superimposed upon the original skin lesion, which have caused many drug companies to add antibiotics to the topical preparation in order to minimize this problem; a contact dermatitis either to the vehicle or the antibiotics added to these preparations; and aggravation of skin diseases such as herpes simplex, herpes zoster, chickenpox and other virus diseases of the skin.

Since these cortisone preparations are not truly curative, but rather palliative, we may temporize and procrastinate so long with the

(*Continued on page 391*)

# SOME FACTORS AFFECTING AVAILABILITY OF PHYSICAL MEDICINE SERVICES

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THE PUBLIC HAS ACCEPTED the idea of total rehabilitation and is anxiously awaiting widespread provision of these services. The term, rehabilitation, means many things to many people. Because the individuals who need these benefits are patients, it is appropriate for the medical profession to define its sphere of responsibility and to offer leadership to provide adequate and proper facilities.

There is a medical specialty known as physical medicine and rehabilitation. This is the concern of physicians who have received some training in the specialty. It is defined as the diagnosis and treatment of neuromuscular diseases and certain musculoskeletal defects. It is concerned chiefly with treatment and utilizes the talents of various types of therapists and counselors.

Rehabilitation is also a concept of medical practice. It implies that every physician offers the best in his area of competence. It demands that from the first day of illness all medical care that is necessary will be provided in a coördinated and integrated manner. It anticipates that preventive medicine will be included when appropriate. It assures that social services and educational programs are provided to those patients who need them. It includes evaluation for the need of prosthetic devices, functional devices, training and re-training to return patients to school, to work, and to highest levels of self-care within their capacities. It recognizes that tremendous expense is associated with this type of care and that financial assistance is needed by the majority of our fellow men who are victims of long-term illness.

## Physical Medicine and Rehabilitation Service

There is poor understanding of what constitutes a physical medicine and rehabilitation service. Many hospitals and physicians provide physical therapy services which are often limited to the use of heat, massage and some therapeutic exercise. This does not, however, constitute a complete physical medicine and rehabilitation service, which is a complex and expensive effort demanding adequate space and equipment along with sufficient numbers of highly trained personnel.

A service should have the following sections: diagnostic—with one or more trained physicians, physical therapy, occupational therapy, speech therapy, and vocational therapy and counseling. It may have intrinsic sections, such as social service, psychology services, manual arts, and industrial arts.

It is obvious that not every hospital can support this extensive and expensive effort; also, the number of severely disabled patients in any given community is relatively small. One complete unit will accomplish more than numerous, scattered, incomplete facilities. This is an area where there must be some community planning.

Complete physical medicine and rehabilitation services are limited in number for many reasons. Too few physicians have seen this field of medicine demonstrated. Medical schools do not provide adequate training. This is because of the expense of establishing an entity for teaching and demonstration. There must be more widespread teaching grants from responsible agencies.

There is an idea that physical medicine and rehabilitation services are very cheap or are free. This in itself causes problems in establishing treatment centers and in obtaining fair payment for treatment.

There is a tendency for voluntary charitable organizations to collect and pool funds. They often support therapists who work independently with little or no medical supervision.

Another reason for the misconception of free care is that many physicians offer physical therapy services in their offices and give the patient the impression that a fee is collected for therapy and that medical evaluation and supervision are free or not essential. This method of rehabilitation service is not adequate for those patients who need it most. It gives physicians and patients a false sense of security, invites therapists to practice medicine, and deprecates the value of a high level of practice in the field of physical medicine and rehabilitation.

Every physician has the right to practice the specialty within the area of his training, ability and competence. The primary obligation he assumes is to examine the patient in an acceptable and thorough manner and to make a diagnosis. He is then responsible for the prescription of treatment, direct supervision of therapists, and continuous evaluation and discharge of the patient when maximum benefit is reached.

It is recognized that there are various types of practice that have developed in the specialty of physical medicine and rehabilitation. Government hospitals and large rehabilitation centers employ physicians on a salary basis. A salary in a general hospital, however, should be for supervision of the department and all that this implies. Examination, evaluation and reëxaminations should be done on a fee basis as with any other type of practice. If this is not done, an undesirable trend of referring patients for therapy without an evaluation, diagnosis or prescription develops. This transforms a department into an operation in which there is no purpose, goal or responsibility. This is harmful to the patient and to the physician alike. There must be developed an idea that physical medicine and rehabilitation is a responsibility for every physician who elects to use it and that he does stand accountable. It is my opinion that when a physician does not devote adequate time to examine patients and to prescribe treatment and does not believe that his evaluation is worthy of a fee, he does not spend enough time to use the facility intelligently.

To advise patients in physical medicine without fee and to charge only for therapy is no different than to examine a patient without fee and to charge only for drugs or apparatus which are dispensed in a section of the office.

When there is not proper examination and direct supervision of therapy, long periods of ill-advised and unnecessary treatment result. This condition, if allowed to continue, may some day seriously embarrass the medical profession.

### PREPAID INSURANCE

There is seldom a day which passes, in my practice, when some patient does not complain because physical medicine services are usually not covered by hospital insurance.

Patients who need physical medicine most are those with longer than usual illness, and they are least able to pay. Prepaid insurance plans must soon recognize this great need. They cannot perhaps cover every alleged type of "therapy," but they can establish some sensible rules to pay the cost in certain regulated situations. Patients can not much longer tolerate this great defect in essential coverage.

It is my estimate that cost of treatment in a well-conducted therapy department averages from 8 to 10 dollars per hour of treatment. Adequate and complete physical medicine and rehabilitation will pay its own way in shortening convalescence and eliminating residual disabilities from illness and injury.

### COMMUNITY SERVICES

Many of our patients, particularly those with long-term illness, need aid beyond the competence of the physician or his co-professional associates. The physician must recognize this and make suitable arrangements for social, educational and vocational activities.

### SOCIAL SERVICES

The social services of hospitals are too seldom used for private patients. These departments should be under direct medical supervision. The department should interview all patients with long-term illness. The social service department may assist the patient to arrange for all essentials outside the hospital after concurrence by the responsible physician. Social service may well be the liaison between all voluntary and governmental agencies that render aid to patients.

### EDUCATION

Seldom does a child live through a school lifetime without missing some days at school. Seldom should a child lose a school year because of illness. Hospital schools and special education for those with diseases and disabilities are expensive and demand skilled and trained teachers. They usually provide some degree of medical care during school hours. This is obviously a responsibility of educators who are usually willing to accept assistance and advice from the medical profession within their area of responsibility. Physicians must make this help and counsel available and of the highest order.

### VOCATIONAL SERVICES

Every state today provides some type of vocational care for the disabled. Individuals are usually eligible at 16 years of age and must be employable at the termination of treatment and training. This is a newly established, essential effort that is rapidly expanding.

Vocational testing, training and placement are the responsibility of these official agencies, and the agencies will fulfill it best without medical interference, but the physician must always assume responsibility for medical services for the patient.

### SUMMARY AND CONCLUSIONS

1. "Rehabilitation" has various interpretations. It is a specialty practice in medicine, and it is a broad concept of total care that provides a patient with all of his needs in every sphere.

2. The practice of physical medicine and rehabilitation demands trained personnel, adequate space, and proper equipment.

3. The usual medical responsibilities are assumed by any physician who practices physical medicine and rehabilitation.

4. Physical medicine and rehabilitation is complex and expensive. It should be included in all prepayment medical insurance plans.

5. Social services should be available to every patient with long-term illness in every large hospital.

6. The physician has definite responsibilities to educational systems which teach children with long-term illness.

7. The medical profession must coöperate with vocational rehabilitation agencies but must exercise essential control over medical practice.

# OPERABLE CONGENITAL MALFORMATIONS OF THE HEART[*]

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## PART III. OPERABLE CONGENITAL MALFORMATIONS IN ADULTS

THE EXPERIENCES of any one individual with congenital malformation in adults is necessarily limited. We have leaned heavily on the experiences of others in order to provide as accurate a picture as possible.

In infancy the chief problem is an accurate diagnosis; with adults the chief problem is weighing the risk of operation against the life expectancy of the patient in the light of the status of his lesion. Patients with the complicated malformations do not survive as a general rule beyond childhood. The question of the type of life work which may be done, when and if marriage is possible, whether pregnancy may be safely undertaken, the indications for the termination of pregnancy, and other special risks are all problems which must be considered. It is not easy to give an accurate prognosis in a given case, since individuals who are entirely well when first seen may suddenly get into difficulties.

### AORTIC AND SUBAORTIC STENOSIS

The great majority of adults with aortic stenosis have the acquired form. Subaortic stenosis, whether due to a muscular band, as in infundibular stenosis in the right ventricle, or to a diaphragm just below the semilunar valves, is far more often diagnosed than it should be. We were unable to locate a single uncomplicated case in the Cardiovascular Registry, which contains a large number of adult hearts.[†]

It is not possible to differentiate aortic and subaortic stenosis clinically. Very loud functional murmurs may occur over the aortic area, at least in children, and one should question the diagnosis of aortic stenosis when a murmur is the only finding.

A history of aortic insufficiency antedating the onset of the stenosis is evidence that it is acquired and on a rheumatic basis. It is of interest that the severity of the symptoms does not necessarily parallel the severity of the stenosis.[111]

The history is one of progressive dyspnea and fatigue. Fainting spells and angina may occur. A harsh systolic murmur and a thrill are usually found over the base, maximal in the second right intercostal space. The murmur is transmitted to the neck and may also be well heard out along the subclavian and axillary arteries. It is not transmitted to the back with the same intensity as the murmurs of pulmonic stenosis. Rarely in the presence of marked aortic stenosis there may be no murmur.[111] The pulses are reduced in volume, and the pulse pressure is low. Aortic insufficiency may be present and a mid-diastolic murmur at the apex.

The electrocardiogram shows left ventricular preponderance; there may be ST-segment and T-wave changes due to coronary insufficiency. Fluoroscopic and X-ray examinations show left ventricular enlargement. Left heart catheterization may be of value in determining the magnitude of the pressure gradient and the degree of the stenosis.

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[*] This is the third of a series of four articles on this subject. The first and second appeared in the May and June issues of the MEDICAL ANNALS.

[†] Courtesy of Dr. William Manion.

The individual with no symptoms and only slight cardiac enlargement does not urgently need operation. A history of fainting spells is, however, a compelling indication for operation. A valvulotomy with the valve being approached from above is increasingly favored by most surgeons. The valve in acquired aortic stenosis may be calcified and difficult to incise without creating aortic insufficiency. The valves in congenital aortic stenosis may also be severely deformed, and it would seem best to correct all of these lesions under direct vision.[112]

## COARCTATION OF THE AORTA

The findings in adults with coarctation differ somewhat from those in children. There may be a history of intermittent claudication in the legs, and the lower half of the body may be relatively shorter than normal. On physical examination evidences of collateral circulation are more prominent. A systolic murmur is present which is well heard in the back, and a mid-diastolic murmur may be heard at the apex. The femoral pulses are reduced (but rarely completely absent) with the characteristic differential in pressure between the arms and legs. Evidences of left ventricular enlargement are found by X-ray and electrocardiographic examinations.

It is important to recognize the presence of an associated lesion; a bicuspid aortic valve is the one most frequently found and may be accompanied by aortic insufficiency. The presence of an abdominal coarctation should be recognized.[113] Coarctation involving the right or left subclavian arteries is detected by blood pressure measurements in both arms.

There is general agreement that patients with coarctation of the aorta do not usually survive beyond the fourth decade. The natural history of this lesion has recently been ably reviewed.[114]

The individual with coarctation faces the hazards of rupture of an aneurysm, a cerebral vascular accident, left ventricular failure, or subacute bacterial endocarditis, and his life expectancy is especially shortened if there is aortic insufficiency due to a bicuspid aortic valve. Prognosis in pregnancy is especially difficult to evaluate.[115] With increasing age arteriosclerotic changes, which are apparently more common in men, make operation more difficult,[116] and small aneurysms of the intercostal arteries, which are found more often in older individuals, make hemorrhage much more likely. It is difficult to urge an operation with a mortality of 5 to 10 per cent on an apparently healthy individual, but between the ages of 10 and 25 operation should be performed because of these considerations.[117]

Below the age of 10 there is some question about whether the anastomosis will increase in size. Above the age of 25 careful evaluation of all factors is necessary. Operation in adults should be performed only when arterial grafts are available, and special precaution should be taken against subacute bacterial endocarditis, since infection at the suture line may result in fatal hemorrhage.[118]

The blood pressure does not fall immediately following surgery and does not fall to normal levels even a number of years after surgery. If there has been disability a good functional result may be expected.

## AURICULAR SEPTAL DEFECTS

Individuals with this lesion may do remarkably well, once they are past infancy, throughout childhood and adolescence. The history is frequently that of an individual who has had an entirely normal life but who in his twenties or thirties begins to be easily fatigued with eventually early signs of congestive failure. Physical examination may reveal an individual of normal habitus or one who is slender and undersized. There may be minimal cyanosis. There is a systolic murmur of moderate intensity over the second left intercostal space which may be accompanied by a thrill. The murmur of pulmonic insufficiency is more often found in adults, and in adolescence a moderately loud mid-diastolic murmur may be present at the apex. $P_2$ may be widely split. The pulses are usually normal, and the blood pressure is normal or a little low. The electrocardiogram shows right ventricular preponderance and frequently right bundle-branch block. X-ray and fluoroscopic examinations show right ventricular enlargement with evidence of a shunt in the lung fields. Catheterization shows the expected increase in oxygen saturation in the right auricle. It is frequently possible to pass the catheter through the defect. Angiocardiography is not ordinarily done.

Partial anomalies of the pulmonic venous return frequently accompany an auricular septal defect. It is probably best not to try to establish their presence by elaborate diagnostic procedures but for the surgeon simply to be prepared to cope with them at operation if they are found. It is, however, of the most crucial importance to determine whether a defect is present which may be closed simply with the use of hypothermia or whether a situation exists which must be corrected with the aid of a pump. One of us (B.G. W.) has seen 1, and possibly 2, exceptions to the rule that an atrioventricularis communis is accompanied by left axis deviation in the limb leads and right ventricular preponderance in the precordial leads.[5, 119] This lesion is rare in adults but does occur.[120] It must be closed with the use of a prosthesis with the aid of a pump, as has been previously discussed. The history may be helpful in making the diagnosis, since individuals with an uncomplicated auricular septal defect seldom get into serious difficulty during the first 2 years of life. A patent foramen primum in which minor anomalies of the septal cusps of the mitral and tricuspid valves are present is a rare lesion at any age. It may, however, be closed during hypothermia with care to avoid the conduction system unless deformities of the valves are present. The differentiation of a patent foramen primum from a patent foramen secundum cannot be made with absolute certainty, although an atrioventricularis communis can usually be distinguished.

Of even greater importance is the exclusion of an associated ventricular septal defect. The usual conventional angiocardiogram is not helpful, but angiocardiography in the course of left heart catheterization may reveal the shunt from the left to the right ventricle.

Mitral stenosis associated with an auricular septal defect is a relatively rare lesion.[121] A patient surviving to the age of 81 has recently been reported.[122] A patient with total anomalous pulmonary venous return surviving to the age of 31 has also been reported[123]; the auricular septal defect in this instance was the unusually high type described by Lewis.[124]

The manner of closure of an auricular septal defect depends somewhat on the type of defect. The various types of operation have been well described and illustrated by Ross.[125]

The most usual type of closure is with the use of hypothermia with simple suture of the defect. Retrograde perfusion of the coronary sinus may prolong the permissible time of occlusion of the venous return of the heart.[126] A large series closed in adults up to the age of 61 has recently been reported.[127]

## PATENT DUCTUS ARTERIOSUS

Uncomplicated patent ductus arteriosus in adults is characterized by the same typical machinery murmur as in children. The other physical and laboratory findings do not differ essentially. The risk of ligation of a ductus is somewhat greater in adults because the vessel is more friable with more likelihood of hemorrhage. If, however, there is any evidence of left ventricular strain a ductus should be ligated in later life also,[117] and certainly if there is any evidence that pulmonary hypertension is developing.

The subject of patent ductus arteriosus with pulmonary hypertension has been ably discussed by a number of writers.[128, 129, 130]

The time of development of the pulmonary hypertension is quite variable, and it is impossible to predict which individuals will develop it and which will not. The findings in these cases are also variable depending on the pulmonary pressure. Any individual with a loud pulmonic second sound should be investigated carefully regardless of the presence or absence of a murmur. With a very high pulmonary artery pressure there may be cyanosis and dyspnea, a systolic murmur possibly accompanied by the murmur of pulmonic insufficiency, and evidence of marked right ventricular preponderance on the electrocardiogram.

Catheterization studies should be done in all cases. It is often possible to pass the catheter into the ductus and into the descending aorta. The exclusion of a high ventricular septal defect is of crucial importance, most difficult and probably impossible if pulmonic insufficiency has developed. Under such circumstances it is best to ligate the ductus, planning subsequent surgery for the septal defect if one proves to be present, rather than subjecting the patient to useless additional complicated and inconclusive diagnostic procedures. If the presence of a ductus cannot be established by catheterization an aortogram should be done.

There appears to be general agreement that if at thoracotomy occlusion of the ductus results in a rise in pulmonary artery pressure it should not be ligated. How much can be predicted from lung biopsy concerning the future course of these patients with respect to their pulmonary hypertension is debatable. This subject will be discussed further later.

## Ventricular Septal Defects

The majority of reported deaths in adults with uncomplicated ventricular septal defects have been due to causes unrelated to the defect. Pregnancy and subacute bacterial endocarditis, however, appear to be special hazards. The history and physical findings do not differ essentially from those in school-aged children. When pulmonary pressure begins to increase, the physical findings will undergo change similar to those in a patent ductus arteriosus with the onset of mild cyanosis, disappearance of the characteristic murmur, and evidences of right ventricular enlargement and failure.[5]

Catheterization studies reveal the expected step-up in oxygen saturation in the right ventricle in the classical case. A pressure gradient often exists between the right ventricle and the pulmonary artery. This is probably most often due to a relative stenosis of the pulmonary orifice in relation to the large shunt. Mild anatomic infundibular stenosis may, however, exist with a ventricular septal defect. It is most difficult to determine whether or not the aorta is overriding sometimes even at autopsy in the borderline case. It is often most difficult also in the presence of pulmonary hypertension to exclude an associated ductus. The pulse pressure in a ventricular septal defect may be very wide, resembling that in a ductus. The presence of tricuspid insufficiency or a defect between the left ventricle and right auricle[131] may cause a ventricular septal defect to be confused with an auricular septal defect.

The individual with a small defect who has never had any disability and who has perhaps successfully undergone a pregnancy should obviously not have closure of the defect at this time, nor should the individual in the third or fourth decade of life with severe pulmonary hypertension. In between these extremes there is a group of cases in which the decision must be carefully weighed. Open surgery of these defects is still accompanied by a high mortality. Compelling indications for surgery are progressive cardiac enlargement or evidence of increasing pulmonary artery pressure due to the shunt. Technical problems in the closure of ventricular septal defects have recently been reviewed.[46]

When signs of pulmonary hypertension exist in the presence of any shunt it should be regarded as primary until proven otherwise. The best way to differentiate primary hypertension from that secondary to long-standing excessive pulmonary flow is from the history. Individuals whose pulmonary disease is their primary problem will have a history resembling the history obtained in tetralogy of Fallot with episodes of fainting, possibly accompanied by transient cyanosis; they may even be squatters. It is useless to close a shunt in those individuals without giving some thought to their pulmonary disease. Possibly a pleurectomy with pulmonary denervation may benefit such patients. Individuals with hypertension secondary to a shunt will give a history of episodes of failure and pneumonia in infancy and regardless of what a lung biopsy shows that individual should probably be given the benefit of the doubt and the shunt closed. Experience with patients with advanced changes due to mitral stenosis which have been reversible leads one to believe that even advanced pulmonary changes due to a shunt are reversible also.

## TETRALOGY OF FALLOT: PULMONIC STENOSIS AND TRANSPOSITION OF THE GREAT VESSELS

A certain proportion of cases of tetralogy of Fallot have required second operations to increase pulmonary flow in response to the needs of the growing individual. At present such problems should be carried along until complete correction of their defect is possible with open cardiac surgery. Tetralogy of Fallot has been reported at the age of 70.[132] A 37-year-old man has recently had complete correction of his defect.[102]

Individuals who have managed to survive with this lesion to adult life should probably await the perfection of an open procedure for total correction of their lesion. The present mortality in open closure of tetralogy of Fallot runs around 30 per cent.

Both valvular and the rarer forms of infundibular stenosis without a ventricular septal defect are characterized by the same findings as in the school-aged child. It should be remembered that the murmur of pulmonic stenosis may resemble the murmur of aortic stenosis and that aortic or subaortic stenosis may be present in both pure pulmonic stenosis and the tetralogy of Fallot. The operation of choice is the Brock procedure[133] unless combined valvular and infundibular stenosis is present; under such circumstances the correction should be under hypothermia from above.

It is better to err on the side of undercorrecting rather than overcorrecting the stenosis whether valvular or infundibular; individuals may survive for long periods with congenital absence of the pulmonic valves,[134] but may go into acute right-sided failure if a pulmonic insufficiency is suddenly created.

A procedure for the treatment of transposition of the great vessels in older individuals appears to offer promise.[135] Another procedure has been suggested to arterialize the left ventricle.[136] This might be a good stop-gap procedure pending perfection of technics for an open switchover operation. We still favor the creation of an auricular septal defect in transposition at all ages.

## DISCUSSION

In patients in whom operation is being delayed or for whom it does not seem advisable care should be taken that there is adequate prophylaxis against subacute bacterial endocarditis if any oral or dental surgery is contemplated.[137] A valve deformed by subacute bacterial endocarditis, such as a bicuspid valve in coarctation, may lead to subsequent congestive failure and death even though the bloodstream is readily sterilized. Patients with an overriding aorta are particularly prone to develop brain abscesses. In cyanotic polycythemic individuals adequate hydration must be maintained at all times in order to avoid cerebral thrombosis.

It is clear that all of the lesions discussed should be operated on in childhood. When they are found in adults these individuals should be referred to a thoroughly trained surgeon because of the much greater risk in the older age group. The best results are obtained when the problem of each individual is carefully weighed by an experienced team.

## SUMMARY

The special problems of adults with operable congenital malformation of the heart have been discussed. These lesions include aortic stenosis, coarctation of the aorta, auricular septal defects, patent ductus arteriosus, ventricular septal defects and pulmonic stenosis.

Because of the hazards of operation in older age groups all factors in each case must be carefully evaluated. It is best to operate on all congenital malformations during childhood.

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# President's Page

## LOOKING AHEAD

It is pleasant to report that preliminary plans are well under way for the coming year. The program and arrangements for the 26th Annual Scientific Assembly are nearing completion. All committees have been appointed. Where possible members have been appointed to committees of their choice. In some instances, however, I have selected individuals who I believe will be most effective in carrying out the policies of the Society. A few have been chosen with the view of assuring continuity in the Society's program.

If you have been preoccupied with practice or teaching in your own particular field, I believe you would find service on the Executive Board and selection of committees an illuminating experience. It has been especially gratifying to me to discover how willingly those whom I have asked have accepted time-consuming chairmanships of committees, especially where it is clear that the assignment will encroach upon their practice and leisure. If our Society functions smoothly and without too much effort, it is due to the willingness of so many of our members to lend their coöperation.

As individuals in our own special medical sections and in our hospitals, we seek advantages for our own patients and teaching programs. Similarly, in the field of medical economics we are influenced by the conviction that our particular fields are the Backbone of Medicine or the Queen of the Specialties. The weakness here is that we frequently act individually rather than as a body.

What doctors do as a group is sometimes just as important as what they do individually. Instances of this in our Society are numerous. For example, our Medical Bureau makes physicians available to the public in a manner which would not be possible on a personal basis. Our Committee on Blood advises with the Washington Regional Blood Center about the preparation and distribution of blood for transfusions. An advisory committee to the Traffic Department acts in a consulting capacity to the Director of Vehicles and Traffic in an effort to remedy conditions which make driving of cars unsafe. The Director of Health for the District of Columbia seeks and obtains advice from an advisory body in regard to the Health Department budget.

How doctors as a group are affected may also be more important than how they are affected individually. Getting the individual back to work, particularly restoring the handicapped patients to a useful place in society, extends beyond Medicine, requiring the active participation of Labor, Industry and Government. This complicates the physician's professional existence considerably. Laws covering professional liability apply to all physicians in the performance of operations, setting of fractures, and the prescribing of medicine. While the attitude of the public and the attitude of the court vary greatly in different communities, they profoundly affect the medical profession as a whole.

I am confident our Society will continue to work toward a satisfactory solution of the medical-economic problems.

James W. Watts

JAMES WINSTON WATTS, M.D.

President, The Medical Society of the District of Columbia, 1957–1958

# MEDICAL ANNALS
## OF THE DISTRICT OF COLUMBIA

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# *Editorials*

## JAMES WINSTON WATTS, M.D.

Dr. James Winston Watts, 91st President of the Medical Society of the District of Columbia, is not a prophet without honor in his own country. In fact, his outstanding abilities in neurosurgery are as much appreciated in his own community as they are throughout the medical world. Few medical men in Washington's history have attained his stature in their chosen field.

Born in Lynchburg, Virginia, on January 19, 1904, he received his early education in that city. He attended the Virginia Military Institute, where he was granted a Bachelor of Science degree in 1924. His degree in medicine was obtained at the University of Virginia, from which he was graduated in 1928.

His specialty training was obtained at the Massachusetts General Hospital in Boston, where he was house officer from 1928 to 1929; Long Island College Hospital in Brooklyn, New York, 1929–30, where he was an intern in surgery; and Chicago University Clinics, Chicago, Illinois, where he was assistant resident in neurosurgery, 1930–31. He was voluntary assistant pathologist to Professor O. Foerster, Wenzel-Hancke Krankenhaus, Breslau, Germany, 1931–32. Among other institutions at which he did postgraduate study and teaching were Yale University and Pennsylvania University hospitals. He was certified by the American Board of Neurological Surgery in 1941.

***Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.***

Dr. Watts is Chief of Neurosurgery at both the George Washington University Hospital and the George Washington Service of the District of Columbia General Hospital He is also consultant in neurological surgery to Walter Reed, Mt. Alto and St. Elizabeths hospitals.

He has been a staff member of George Washington University School of Medicine since 1935. He is, at present, Professor of Neurological Surgery and Head of the Department of Neurology and Neurological Surgery.

Among the organizations of which he is a member are the American College of Surgeons, International College of Surgeons, of which he is the Chairman of the Section of Neurosurgery, the Association for Research in Nervous and Mental Diseases, the Harvey Cushing Society, the Southern Medical Association, the Washington Academy of Surgery, the Washington Academy of Neurosurgery, the Southeastern Surgical Society, American Neurological Association, Academy of Neurology, Association of Military Surgeons, Association of American Medical Colleges, the Medical Society of the District of Columbia, and several other scientific bodies.

Many honors have come to Dr. Watts, among them the John Horsley Memorial Prize, presented to him by the University of Virginia in 1942, and a citation in 1956 from the President's Committee on Employment of the Physically Handicapped for "outstanding and meritorious service." He was elected an honorary member of the Roman Surgical Society in Rome, Italy in 1953, and of the Academy of Surgery in Lima, Peru in 1954. Other surgical groups from which he has received honorary memberships are Neurologia Quirurgia y Psicocirugia, Mexico, and Sao Paulo Academy of Medicine, Brazil. Last year the President of the Dominican Republic conferred upon him the Order of Duarte, Sanchez y Mella. This decoration carries with it the rank of Commander.

Dr. Watts has been active in the District Medical Society's affairs for many years, having been chairman and a member of a number of committees. He was at one time Secretary of the Society's Section on Nervous and Mental Diseases, later Vice Chairman and Chairman, and Chairman of the Society's Board of Censors.

Dr. Watts was married on October 24, 1931 to Julia Harrison, also of Lynchburg. They have two sons, James Winston III, a student at Woodbury Forest School in Virginia, and Randolph Harrison, a student at St. Alban's, Washington.

He is a member of the Metropolitan Club, the Chevy Chase Club, the Farmington Country Club, and the Annapolis Yacht Club.

Personal friends know Dr. Watts as "Jim." They find him a delightful host, always gracious and thoughtful. He, in turn, enjoys their company and likes to entertain them either in his home in Washington or near Annapolis.

Deceptively shy and modest of manner, Dr. Watts is firm in his convictions. Those who know him best can testify that once he has reached a decision it takes convincing arguments to change his position. This would suggest stubbornness, which is not the case. Possessing a reflective mind, Dr. Watts weighs the facts carefully before coming to a conclusion, which bodes well for the Society. Members can be certain that their President in the coming year will give thorough consideration to the problems confronting the organization. Once he has satisfied himself as to the proper course, he will pursue it diligently.

The Society has in Dr. Watts not only an eminent physician and a keen observer of the medical scene, but a gentleman in every sense of the word.

## THE GENERAL PRACTITIONER'S ROLE

Recognizing the fact that the most significant bottleneck impeding the progress of the mental health movement in the United States is the limited number and poor distribution of trained psychiatrists, the American Psychiatric Association is exploring ways by which the services of other people can be brought into the field.

It seems reasonable to assume that the people who are in the most strategic positions in dealing with potential psychiatric patients are the family physicians. Unfortunately, in the past there has existed a rather distinct isolation between psychiatrists and general practitioners. Traditionally, this has been due to the fact that psychiatry concerned itself mostly with the custodial care of psychotics and, therefore, had relatively little in common with the other specialties of medicine. In recent years, however, with the tremendous impetus provided by the medical experiences of World War II, psychiatry itself has become more concerned with the practical treatment problems of the less disturbed patients. As a result, larger and larger numbers of psychiatrists have gone into private practice, where they work side by side with the physicians who practice in the other specialties. In spite of this new development, there is still relatively little communication of ideas between the psychiatrists and the other physicians.

Obviously, the family physician is the one who sees the bulk of the total psychiatric patients, and whether he realizes it or not, and whether he wants to or not, he is constantly put in the position where he has to handle psychiatric problems. For many evident reasons he is not going to refer all, or even most, of these patients to a psychiatrist. Therefore, he could undoubtedly do a better job with his patients if the latest psychiatric knowledge were available to him. The American Psychiatric Association believes that it is the responsibility of organized psychiatry to make this knowledge accessible. During the past year the A.P.A. has appointed a committee, under the chairmanship of Dr. Robert Matthews (Pennsylvania State Commissioner of Mental Hygiene), which established a liaison with a corresponding committee of the American Academy of General Practice, under the chairmanship of Dr. Andrew Tomb (Victoria, Texas), to explore the ways of accomplishing the task. As a result of their efforts the National Committee Against Mental Illness provided funds for the purpose of studying the methods by which a greater understanding of psychiatry might be conveyed to the general practitioner. In April, 1957 the project was activated by setting up a staff in the A.P.A.'s Central Office in Washington.

The project hopes to develop practical methods by which the general practitioner can be shown how to handle a greater share of the Nation's psychiatric problems. It is appreciated that what the general practitioner needs, above all, is practical, down-to-earth information which will not require too much of his time to acquire. The usual type of postgraduate course could be made available to a few physicians but would probably require more time than the physicians are prepared to spend. Psychiatrists tend to assume that the other physicians are generally resistant to acquiring any psychiatric training. The apparent resistance may be due to the possibility that these physicians have not been offered very much that is practical for them to use. The A.P.A. project expects that when material is presented in a practical form, and in a way which does not require too much time to assimilate, the general practitioner will be more receptive than he has appeared to be heretofore.

The A.P.A. project expects to produce a Handbook for the general practitioner which will contain the useful kind of mental health information he is most likely to need in his practice. Various informative discussions can be put on tapes and records and made available to medical societies. Training films can be developed. Brief, intensive courses can be offered. An Information Service has been established for the general practitioner's use. The success of the venture will depend a great deal upon the coöperation of the general practitioner; his wishes, inquiries, and suggestions are invited.

Charles E. Goshen, M.D.
*Project Director,*
*General Practitioner Education Project,*
*American Psychiatric Association*

## PSYCHIATRY FOR ALL

I was most gratified to read the editorial in the April, 1957 issue of our Medical Annals entitled, "Coöperation of General Practitioner and Psychiatrist." This is but part of the story in the relationship of the general physician with the patient and the psychiatrist.

It is quite well known that the general physician sees about 85 per cent of the patients seen by all doctors in this country and that many of these patients need some degree of mental aid, ranging from pure but simple listening to psychosomatic medical care, or to outright psychiatric care by the fully qualified psychiatrist.

Some of us in general practice do not feel that the answer lies in the fifty million or more prescriptions written for tranquilizing or other sedative drugs, nor in the 185 million dollars expended for these drugs by our patients. We have felt that something should and must be done about this, and that this something should be in the field of better and more education for the medical students, interns, and general physicians in the field of psychiatry or psychosomatic medical care—call it what you will.

Since we general physicians have very little control over the education of the student or intern, and since we are not too well trained in psychiatry, it was deemed advisable to begin with ourselves.

In the fall of 1956 the American Academy of General Practice appointed a mental health liaison committee to work with an advisory committee of the American Psychiatric Association. The prime purpose of these two committees was to create a better understanding and thereby a better association with our psychiatrist colleagues. We also wished to develop a program of education in many phases of psychiatry in such a manner that the general physician could better understand the problems of his patients and aid those patients with better psychosomatic care. This was a new phase in medicine.

On October 26 and 27, 1956, a very successful and stimulating meeting was held by these two committees in Washington, D. C. Definitive plans were outlined, discussed, and presented to the Council of the American Psychiatric Association on October 28, 1956. The Council accepted the report of these two committees after a number of recommendations had been made.

These two committees stressed the objectives and recommendations needed for physicians in the general practice of medicine today to aid in the treatment and care of psychiatric patients. They felt that it was important to teach medical students and interns the type of psychiatry they will need in general practice. They discussed preceptorships and mental health fellowships for general physicians, and even having the general physician work part-time in mental health clinics and state hospitals under proper direction. Much time was spent in discussing the great need for an exchange of ideas between psychiatrists and general physicians about drugs and other agents in view of the vast amount of ataraxics which appear on the market with regular frequency.

These two committees were then made permanent liaison committees of the American Psychiatric Association and the American Academy of General Practice.

Now began the task of searching about for financial aid in order that these groups could hold future meetings and follow through on the program outlined. This was no small task. Recently, the American Psychiatric Association received a grant in the amount of $27,800 from the Albert and Mary Lasker Foundation through the National Mental Health Committee to help these groups carry out their proposed program. This grant will allow for the employment of a professional person, secretary, travel budget, consultants, and related expenses. It is for one year and may be renewed.

Many phases of this program will come to the attention of all physicians in the near future. One very important step to be undertaken will be the psychiatric reference guide for physicians, "The Physician's Handbook of Mental Health." This is to offer in one volume the actual material a physician is likely to need in order to bring to his patients the benefits of sound mental health principles. This guide is designed to be both practical and as nontechnical as possible.

The enthusiasm and accord present from the very moment these two committees met for their first conference made the task for the common good an easy one to approach.

I. PHILLIPS FROHMAN, M.D.

## POSTMORTEM OPPORTUNITIES*

A neglect parallel to the failure to use case records properly[1] is the disregard of postmortem opportunities. We are still satisfied with far too low a percentage of postmortem examinations. A large part of our medical knowledge has come from the necropsy room. It is a disturbing state of affairs that in this day of alleged enlightenment and progress in medicine, it should be necessary for anyone to point out to us the value of the necropsy.

The statement is often made that the reason for so low a percentage of necropsy is that the public is not educated to a point where we can secure their coöperation. Unfortunately, the real reason is something else. First, some of us may not be sufficiently educated to regard the autopsy as necessary. Second, in some cases our own inertia has prevented us from trying to overcome the indifference or hostility of the public. If the necropsy becomes a routine procedure, the public will tend to regard it as commonplace and accept it as a matter of fact.

General practice has in many areas neglected the postmortem. If we have been on friendly terms with the family and occupy the position of respect and esteem that we should, they will seldom refuse permission. It is not difficult for us, if we are friendly and sympathetic, to convince them that we shall be doing future patients a wrong if we do not learn everything possible about the case we have been dealing with. It is not asking too much that we should hold as high a place as this in the hearts of our patients. It demands personal and professional merit of a high order, but unless we possess this quality, there is a question whether we should be practicing.

WILLIAM R. LAIRD, M.D.

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* EDITOR'S NOTE: These excerpts from Dr. Laird's book, "The Philosophy of Medicine," are reproduced in the MEDICAL ANNALS through the courtesy of the author and his publisher, Education Foundation, Inc., Charleston, W. Va.

[1] Editorial: M. Ann. District of Columbia, 1957, **26**, 313.

# REPORT OF DELEGATES TO AMA HOUSE OF DELEGATES

The House of Delegates of the American Medical Association convened at the 106th Annual Meeting of the Association at 10:00 a.m. on Monday, June 3, 1957, in the Grand Ballroom of the Waldorf-Astoria Hotel in New York City.

At the same time the Annual Scientific Meeting of the Association was being opened in the new Coliseum at Columbus Circle and Broadway. The facilities at the Coliseum seemed ideally suited for a meeting of this type and, as a result, nearly 20,000 physicians registered for the scientific sessions, which is the largest number ever to attend an AMA meeting.

The House of Delegates had an extremely busy meeting. It considered 66 resolutions as well as many additional reports from the Board of Trustees, councils and committees, and, in addition, it elected the officers of the Association for the coming year as well as 4 members of the Board of Trustees and members of the various councils.

At the opening session, Dr. Dwight H. Murray, retiring AMA president, read a congratulatory telegram from President Dwight D. Eisenhower. Later, in his address to the House, Dr. Murray stressed the triple theme of the personal touch in medicine, the necessity for freedom in medical practice, and the need for professional unity. Dr. David B. Allman, in-coming president of the AMA, in his address warned against the dangers of third-party contractural agreements involving fixed fee schedules.

The House at this session voted the 1957 Distinguished Service Award of the AMA to Dr. Tom Douglas Spies for his outstanding contributions to the science of human nutrition. For only the third time in AMA history a special citation was awarded to a layman for outstanding service in advancing the ideals of medicine and contributing to the public welfare. The recipient of this was Henry Viscardi, Jr., of West Hempstead, N. Y., founder and president of Abilities, Inc., which employs only severely handicapped persons. The Goldberger Award in nutrition research was presented to Dr. Paul Gyorgy of Philadelphia. Dr. H. G. Weiskotten, who retired after many years' service as chairman of the Council on Medical Education and Hospitals, received 2 bound volumes of letters of appreciation and also an ovation from the House.

## New Principles of Medical Ethics

In one of its most important actions the House approved the long-discussed revision of the Principles of Medical Ethics, originally submitted at the 1956 annual meeting in Chicago. The final version, presented by the Council on Constitution and By-laws and then amended by reference committee and House discussions in New York, now reads as follows:

### "Preamble

"These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

"*Section 1.* The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

"*Section 2.* Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

"*Section 3.* A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

"*Section 4.* The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

"*Section 5.* A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

"*Section 6.* A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

"*Section 7.* In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

"*Section 8.* A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

"*Section 9.* A physician may not reveal the confidences entrusted to him in the course of medical attendance or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

"*Section 10.* The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community."

It will be noted that the controversial Sections 6, 7 and 10 have been reworded and as finally adopted were satisfactory to all.

In approving the new Principles of Medical Ethics, the House of Delegates also reaffirmed the "Guides for Conduct for Physicians in Relationships with Institutions," adopted in 1951, and requested the Board of Trustees to devise and initiate a campaign to educate both physicians and the general public to the dangers inherent in the illegal corporate practice of medicine in its various forms.

## Guides for Relations with UMWA Fund

On the basic issue of third-party intervention, as it affects the patient's free choice of physician and the physician's method of remuneration, the House adopted the "Suggested Guides to Relationships Between State and County Medical Societies and the United Mine Workers of America Welfare and Retirement Fund," which were submitted by the AMA's Committee on Medical Care for Industrial Workers. In approving the guides, the House also recommended that the Board of Trustees study the feasibility and possibility of setting up similar guides for relations with other third-party groups such as management and labor union plans.

The statement, which outlines both medical society and UMWA responsibilities, contains these "General Guides":

"1. All persons, including the beneficiaries of a third-party medical program such as the UMWA Fund, should have available to them good medical care and should be free to select their own physicians from among those willing and able to render such service.

"2. Free choice of physician and hospital by the patient should be preserved:

"a. Every physician duly licensed by the state to practice medicine and surgery should be assumed at the outset to be competent in the field in which he claims to be, unless considered otherwise by his peers.

"b. A physician should accept only such terms or conditions for dispensing his services as will insure his free and complete exercise of independent medical judgment and skill, insure the quality of medical care, and avoid the exploitation of his services for financial profit.

"c. The medical profession does not concede to a third party, such as the UMWA Welfare and Retirement Fund, in a medical care program the prerogative of passing judgment on the treatment rendered by physicians, including the necessity of hospitalization, length of stay, and the like.

"3. A fee-for-service method of payment for physicians should be maintained except under unusual circumstances. These unusual circumstances shall be determined to exist only after a conference of the liaison committee and representatives of the Fund.

"4. The qualifications of physicians to be on the hospital staff and membership on the hospital staffs is to be determined solely by local hospital staffs and by local governing boards of hospitals."

## The Medicare Program

The House considered 3 resolutions dealing with the Federal Government's Medicare Program for the dependents of servicemen. The delegates adopted one resolution condemning any payments under the Medicare Program "to or on behalf of any resident, fellow, intern or other house officer in similar status who is participating in a training program." Government sanction of such payments, the House declared, would give impetus to the improper corporate practice of medicine by hospitals or other nonmedical bodies. Such proposals, the House added, would violate traditional patterns of American medical practice, seriously aggravate problems of hospital-physician relationships, encourage charges by hospitals for residents' services to patients not under the Medicare Program, and create a variety of additional problems in such areas as medical licensure and health insurance.

In another action on Medicare, the House recommended that the decision on type of contract and whether or not a fee schedule is included in future contract negotiations should be left to individual state determination. In this connection, however, the House restated the AMA contention that: the Dependent Medical Care Act as enacted by Congress does not require fixed fee schedules; the establishment of such schedules would be more expensive than permitting physicians to charge their normal fees, and fixed fee schedules would ultimately disrupt the economics of medical practice.

The House also suggested that the AMA attempt to have existing Medicare regulations amended to incorporate the Association's policy that the practice of anesthesiology, pathology, radiology, and physical medicine constitute the practice of medicine, and that fees for services by physicians in these specialties should be paid to the physician rendering the services.

### New Statement on Medical Schools

The House adopted a new statement entitled "Functions and Structure of a Modern Medical School" to replace the "Essentials of an Acceptable Medical School," initially approved by the House of Delegates in 1910 and most recently revised in 1951. Presentation of the document followed a year of careful study by the Council on Medical Education and Hospitals in collaboration with the Association of American Medical Colleges.

The statement is intended to provide flexible guides which will "assist in attaining medical education of ever higher standards" and "serve as general but not specific criteria in the medical school accreditation program." The document encourages soundly conceived experimentation in medical education, and it discourages excessive concern with standardization.

### Occupational Health Programs

The House also approved a new statement on the "Scope, Objectives and Functions of Occupational Health Programs," submitted through the Board of Trustees by the Council on Industrial Health. The Board report to the House said: "The statement describes and defines orthodox in-plant medical programs as understood in this country today and distinguishes clearly between such programs and the various plans for comprehensive medical care of the sick. It should help to resolve misunderstandings concerning the specialty of occupational medicine."

In adopting the statement, the House agreed with a Reference Committee report which declared that "the House has before it a statement which for the first time clearly defines the scope, objectives and functions of occupational health programs. It marks the needs and boundaries of occupational medicine. It states in a positive fashion the proper place of occupational health programs in the practice of medicine and it clearly charts the pathways of communication between physicians in occupational health programs and physicians in the private practice of medicine."

### Social Security for Doctors

Two resolutions favoring compulsory inclusion of physicians in the Federal Social Security system and another one calling for a Nation-wide referendum of AMA members on the issue were rejected by the House. The delegates reaffirmed their opposition to compulsory coverage of physicians under the Old Age and Survivors' Insurance provisions of the Social Security Act. They also recommended a strongly stepped-up informational program of education which will reach every member of the Association, explaining the reasons underlying the position of the House of Delegates on this issue. The House at the same time reaffirmed its support of the Jenkins-Keogh Bills.

### Miscellaneous Actions

Among other actions the House:

Congratulated the Board and the Committee on Poliomyelitis for their prompt action in stimulating national interest in the polio immunization program;

Recommended further study and a progressive program of action, probably including legislative changes, to solve the problem of narcotic addiction;

Urged a more careful screening of television and radio patent medicine advertisements;

Directed the Board of Trustees to investigate the indiscriminate use of stimulants such as amphetamine, particularly in relation to athletic programs;

Directed the Speaker to appoint a committee of 5 House members to study the Heller Report, a management survey of the Association's organizational mechanisms;

Commended the Law Department for its special report on professional liability and urged state and county medical societies to establish claims prevention programs and to show the new film, "The Doctor Defendant";

Opposed the establishment of any further veterans' facilities for the care of nonservice-connected illnesses of veterans;

Condemned the compulsory assessment of medical men and staff members by hospitals in fund-raising campaigns; and

Recommended payment of transportation expenses of Section Secretaries for AMA meetings which they are required to attend.

### Election of Officers

As is usual, part of the session on the fourth day of the House was devoted to election of officers, trustees, etc. This year an unusual number of vacancies (4) arose on the Board of Trustees, which added interest to the elections. Following is the result:

Dr. Gunnar Gundersen, of La Crosse, Wis., member of the AMA Board of Trustees since 1948 and Chairman for the past 2 years, was unanimously chosen President-elect for the year ahead. Dr. Gundersen, who also was first chairman of the Joint Commission on Accreditation of Hospitals from 1951 to 1953, will become president of the American Medical Association at the June, 1958 meeting in San Francisco as successor to Dr. David B. Allman of Atlantic City, N. J.

Dr. Jesse Hamer, of Phoenix, Ariz., Vice President; Dr. George F. Lull, of Chicago, Secretary; Dr. J. J. Moore, of Chicago, Treasurer; Dr. E. Vincent Askey, of Los Angeles, Speaker of the House of Delegates; and Dr. Louis Orr, of Orlando, Fla., Vice Speaker.

Four new members were elected to the Board of Trustees: Dr. George Fister, of Ogden, Utah, to succeed Dr. James R. Reuling; Dr. Cleon Nafe, of Indianapolis, Ind., to succeed Dr. James R. McVay; Dr. James Z. Appel, of Lancaster, Pa., to replace the late Dr. Thomas P. Murdock; and Dr. Raymond McKeown, of Coos Bay, Ore., to replace Dr. Gundersen. Dr. Edwin S. Hamilton, of Kankakee, Ill., was elected Chairman of the Board at its organizational meeting after the elections in the House.

Dr. Homer L. Pearson, Jr., of Coral Gables, Fla., was renamed to the Judicial Council. Two new members were elected to the Council on Medical Education and Hospitals: Dr. Clark Wescoe, of Lawrence, Kansas, to succeed Dr. Weiskotten, and Dr. Warde B. Allan, of Baltimore, Md., to succeed Dr. F. D. Murphy, of Lawrence, Kansas.

For the Council on Medical Service, Dr. Robert L. Novy, of Detroit, Mich., was reëlected, and Dr. Hoyt Woolley, of Idaho Falls, Idaho, was chosen to replace Dr. McKeown. Dr. Warren W. Furey, of Chicago, was reëlected to the Council on Constitution and By-laws.

The above is a very brief summary of the transactions of the House of Delegates at its most recent meeting. A full and detailed report will be carried in the *Journal of the AMA*, starting in the June 22 issue, and should be read by every member. Committee members of this Society will find some of the actions of the House of particular interest as the problems confronting the national organization are essentially similar to those in each locality and the basis for approach to a problem is usually clearly outlined in the policies of the parent body.

Attention of the membership is again called to the fact that meetings of the House are open to AMA members and that any member of the Association may appear before any reference committee to present information or his views on the matter under discussion. It is hoped that in the future more members will avail themselves of the opportunity to observe the House in session and to participate in its hearings.

Respectfully submitted,
Raymond T. Holden, M.D., *Delegate*
Victor R. Alfaro, M.D., *Delegate*
Theodore Wiprud, *Secretary*

# On the Lighter Side

Last month Pfizer Laboratories took a calculated medical risk and decided to stage their annual Pfizer Physicians' Golf and Tennis Tournament at three different area country clubs on the same day. The day's weather was damp but the deluge held off until all three tournaments and the follow-up banquets were over and done with. The Congressional Country Club was the scene of the tournament for the Northwest area physicians. Prince Georges County Country Club was the host to the Northeast area physicians; and for those physicians who live and practice in the southern area the scene of the tournament was the Belle Haven Country Club.

This report has to do with only the "doin's" at the Congressional C. C. One hundred sixty-eight golfers and 6 tennis players suited up for the sporting events. A total of 225 physicians put their 450 feet under the festive board to partake of the Pfizer food following a few rounds of the Pfizer cocktails.

In the sporting field the tennis boys, 6 in number, came up with 3 top tennis stars, namely, Drs. Thomas McMahon, Isadore Rodis and Harry Horstman. These nimble gentlemen received packaged tennis balls as prizes for their love games. The golfers who qualified for prizes received large and small golfing trophies plus assorted fancy sport shirts.

Dr. Steve Oristian, an expert golfer, won the large Pfizer trophy with his professional low gross of 70. Close by, with a very decent gross of 72, was that old pro, Dr. William (Bill) Evans. Dr. Evans received a smaller-sized trophy. On the extreme other end of the score card, with the highest gross of 138, was duffer Dr. Robert McDonald. His prize was a sport shirt.

Dr. John Everett topped the remaining field with a low net of 71 and a gross of 77. Second prize winners in this field were Dr. Hayden Kirby-Smith tied with Dr. James Fitzgerald, each with a gross of 77.

The early birds, who received nothing better than wet feet for their trouble, were early risers Drs. Clyde and George Reeves, Dr. D. Franklin Hodge, and Dr. C. P. Pierson. This foursome appeared on the first tee at 8:00 a.m., so I am told by the Pfizer representative on the scene. The prize for the best dressed golfer went to a woman this year, Dr. Kreutscher. She received a man's sport shirt.

The golfing was excellent, the cocktails were conducive to many a good story, and the food was very satisfactory. Thank you, Pfizer.

Bowling note: Money talks—especially that long green—and some of our average duckpin bowlers in the D. C. Medical-Dental Bowling League worked themselves into a veritable frenzy of bowling over the mouth-watering prospect of fingering a little of the lettuce that was offered for high set on Sweepstake Night following the regular bowling season. Fantastic scores were rolled by Dr. D. Franklin Hodge, a 98 average bowler, who rolled the high set of the Night—a 374—and with the 51-pin handicap gave him a 425 set to win first money of $30. Now with that much mula in his jeans, one would think that his Columbia team-mates would benefit from his windfall! Well, you are right—his Columbia teammates are still wondering!

Second high set of 394, good for $20, went to Dr. Louis B. Woolf, a 93 average bowler with the Garfield team. His 328 set with his 66-pin handicap was 1 pin better than Dr. Sherman A. Thomas, a 92 average bowler with Doctors team. Dr. Thomas' 393 won him $18 third-prize money. Fourth high set prize money of $15 went to Dr. George A. Resta, a 106 average bowler on the Children's team. Dr. Resta had a 383. Fifth high set winner was Dr. Edgar N. Brawner, a 94 average bowler of the Emergency team, who won $15 for his 379 including handicap.

The University Club Bowling League has many medicos on its 8 teams. This year a team co-captained by Dr. J. Earl Kadan and Dr. Howard Donald won first place in the League's standing and captured all the best silverware amongst its many honors. Dr. Donald also took top money in the U. C.'s Calcutta Bowling Tournament with a high set of 348. Dr. Lee Stevenson took second money with a 343.

Frivolity note: Among the best high-kicking male dancers from the chorus line of a show put on

(*Continued on page 391*)

# ANNUAL REPORT ON ADMINISTRATIVE SERVICES OF MEDICAL SERVICE*

The past year has been one of development and change with respect to many of the policies and programs of Medical Service, and the role of the administration in carrying out the directives of the Board of Trustees has been most active. The climax to a year of concentrated administrative activity occurred last November, when we offered the new Surgical-Medical Contract to the public, and in December when we began processing claims for dependents of members of the uniformed services.

While the policy decisions under which Medical Service operates are established by its own Board of Trustees, administrative work is entrusted to the staff of Group Hospitalization, Inc., which serves as the agent of Medical Service for this purpose. We believe that these highly skilled employees are in a position to render the best possible service to the medical profession in this community, and that the development of systems and forms, methods and procedures for both the new Surgical-Medical program and the Dependents' Medical Care Program during 1956, in addition to their ability to carry on the routine business of the organizations, is a testimonial to their energies and abilities. At this time, I should like to highlight some of the areas in which your administrative staff has created a record of achievement in service to the medical profession and the public.

*Enrollment.*—At the end of 1956, there were 599,407 participants enrolled, a net gain of 62,342 participants for the year. This gain is not as great as the net gain we enjoyed in 1955, when 75,970 participants were added to our rolls, but it is a substantial gain nonetheless, and serves as an expression of public confidence in our program. While Medical Service serves a very limited area in comparison to Blue Shield Plans throughout the country, most of which operate on a statewide basis, we continue to forge ahead in the national enrollment picture. In 1953, Medical Service ranked eighteenth in total enrollment among all Blue Shield Plans; it was seventeenth in 1954, sixteenth in 1955, and fifteenth in 1956. Based upon recent estimates of the United States civilian state population, Medical Service ranks second among all Blue Shield Plans in the percentage of population enrolled. While approximately half of our enrollment consists of Government employees and their dependents, there are still large numbers of Government employees who are not covered under our program, and the addition of these non-subscribing individuals, many of whom have no prepayment protection of any kind against the cost of medical care, would undoubtedly swell our ranks to the position where we would lead all Blue Shield Plans in the percentage of population enrolled.

While the new Surgical-Medical Program was first offered to the public last November, enrollment in this program is only now picking up momentum. At the end of March, 26,607 subscribers and their dependents were protected under the new Surgical-Medical Contract, and of these, 1,153 were also protected under major medical coverage. Recently introduced health legislation for Federal employees is designed to provide a contribution toward the type of coverage which our new Surgical-Medical and Major Medical contracts provide, and we hope to be in a favorable position to offer comprehensive coverage to Federal employees in the event legislation is passed which would permit us to do so.

*Participating Physicians.*—At the present time there are 1,909 doctors of medicine, 53 podiatrists, and 22 oral surgeons participating in the program. There has been a net gain of 115 physicians and practitioners participating in the program during the past 12 months. It is encouraging that there should be a gain in physicians during the past year inasmuch as the category of Coöperating Physicians was discontinued in 1956, and more than 400 Coöperating Physician agreements were cancelled. While most of these physicians signed agreements to become Participating Physicians in Medical Service, a number did not. Their loss has been more than made up by the addition of other physicians in the area. The support which Participating Physicians give to Medical Service is one of the chief distinctions between our program and the coverage offered by commercial insurance companies. The coöperation of physicians in all aspects of our operations represents a service to the Plan and to the community which cannot be evaluated in terms of dollars.

*Claims.*—Increased enrollment and increased physician participation go together to bring about an increase in the work load. During the year, our Claims Department processed 650 claims each working day. This represents an increase of more than 100 claims a day over the volume of the preceding year. In addition, a daily average of 277 calls by phone or in person were handled by Claims Department personnel. We realize that the handling of information related to claims problems is a serious responsibility, and our personnel are especially qualified and trained for this work. Considering the volume and variety of situations with which they are faced from day to day, I am confident that they discharge their duties with a high degree of satisfaction.

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* Presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, April 17, 1957.

In addition to its regular claims' processing and informational functions, the Claims Department has absorbed the processing of Medicare claims in a manner which has evoked commendation from the people in Government with whom we have been working. At the present time, Medical Service has processed more than 1,000 claims for physicians' services under the Medicare Program, and we are now handling about 125 physician claims each week. No physician claims have been returned by the Government for correction of any error or because of incomplete preparation. The development of the machinery for handling the Medicare Program in our organization involved a great deal of planning and organization. We feel that the whole program has been refined to a tightly-knit, efficient operation which will justify the confidence of the Medical Society in asking us to serve as the fiscal administrator of this program, and of the Government in entering into the type of contract which permits the Society and the Plan to function side by side in the discharge of duties which each is best qualified to perform.

All in all, it has been a strenuous but a satisfying year. I cannot help but take pride in the manner in which the administrative staff has rolled up its sleeves and demonstrated its adaptability to implement the imagination and wisdom of the Board of Trustees.

GEORGE B. MCGOVERN, *Manager*

## FIFTH INTERNATIONAL CONGRESS OF INTERNAL MEDICINE

The Fifth International Congress of Internal Medicine will be held at the new Sheraton Hotel, Philadelphia, April 24-26, 1958. This will be the first meeting of the Society outside of Europe. The previous Congresses, at 2-year intervals, were held in Paris, London, Stockholm, and Madrid. At those meetings, however, the United States, as well as many other nations throughout the world, was represented. The present membership of the Society, including 48 nations, is about 3,000.

This Society, the only international one embracing all aspects of internal medicine, was organized in 1948 and largely at the instigation of Professor Nanna Svartz of Stockholm, the physician to the King of Sweden. It was her contention that the various branches of internal medicine should be kept in touch with one another, as is accomplished in North America by the American College of Physicians, and that this should be done on a truly international basis. She also emphasized the importance of purely personal and nonpolitical contacts among physicians of different countries.

The objectives of the Society, as stated in its statutes, are "to promote scientific knowledge in internal medicine, to further the education of the younger generation and to encourage friendship among physicians of all countries." The members are "specialists in internal diseases, acknowledged as such and accepted by the appropriate national societies of internal medicine."

The first president of the International Society was Professor A. Gigon, of Basel, Switzerland. He was succeeded, in 1952, by Dr. Svartz and she, by Sir Russell Brain, the President of the Royal College of Physicians of London, who is presently in office.

At the Philadelphia Congress it is planned, through lectures and panels, to analyze medical achievements of world-wide significance, to evaluate certain apparent problems, and to chart courses of action designed to enhance technical knowledge and to aid in the continuing war against disease. At the same time, the plan includes such social and cultural activities as will tend to promote coöperation, friendship and mutual understanding among physicians and peace among their countries.

The 1958 Annual Session of the American College of Physicians will occur in Atlantic City, April 28 to May 2, immediately following the Philadelphia Congress.

# DR. GUNDERSEN TO HEAD AMA IN 1958

Dr. Gunnar Gundersen, surgeon from LaCrosse, Wisconsin, a member of the Board of Trustees of the American Medical Association since 1948 and Chairman of the Board since 1955, will be inducted into its highest office at the San Francisco convention in 1958. He was elected President-elect of the AMA at its 106th Annual Meeting, which was held in New York City, June 3-7, 1957.

Dr. Gundersen

Dr. Gundersen is a native of LaCrosse, Wisconsin, and co-founder of the Gundersen Clinic at La-Crosse. He received his medical degree from Columbia University College of Physicians and Surgeons in 1920. He was a member of the State Board of Regents of the University of Wisconsin from 1931 to 1937. He was President of the State Medical Society of Wisconsin, 1941–42, and Speaker of its House of Delegates for about 5 years. He was a member of the Wisconsin Board of Health from 1943 to 1952, and was elected first chairman of the Joint Commission on Accreditation of Hospitals when it was formed in 1951.

Dr. David B. Allman, of Atlantic City, was inaugurated President of the Association on June 4 in the Grand Ballroom of the Waldorf-Astoria Hotel, succeeding Dr. Dwight H. Murray, of Napa, Calif. Dr. Gundersen administered the oath of office to Dr. Allman and presented the Past President's Medal to Dr. Murray, the retiring President. The distinguished service medal was conferred by Dr. Allman upon Dr. Tom D. Spies, head of the Department of Nutrition and Metabolism at Northwestern University Medical School, Chicago, and Director of the Nutrition Clinic at Hillman Hospital, Birmingham, Alabama. He was chosen for his outstanding contribution to the science of human nutrition.

For the third time in its history the AMA awarded a citation for distinguished service to a layman, Mr. Henry Viscardi, Jr., West Hempstead, N. Y., for his leadership in the employment of handicapped persons. Mr. Viscardi is founder and president of a unique company, Abilities, Inc., which employs only severely disabled persons.

Parke, Davis and Company, pharmaceutical manufacturers, was cited by the House of Delegates for its continuing series of institutional messages in national magazines which accurately and dramatically tell the story of medicine and medical progress. Mr. Harry Loynd, President of the Company, received the award from President Murray.

Drs. Raymond T. Holden and Victor R. Alfaro, the Medical Society's delegates to the AMA, and Theodore Wiprud, Secretary of the Society, attended the sessions of the House of Delegates. A large delegation from Washington attended and took part in the scientific meetings. The following papers were presented by Washington physicians before the various sectional meetings:

*Section on Diseases of the Chest.* Panel Discussion on the Treatment of Pulmonary Infections: "Medical Treatment of Chronic Pulmonary Infections," Dr. Sol Katz.

*Section on Internal Medicine.* "The Prevention of Subsequent Myocardial Infarction," Dr. Benjamin Manchester.

*Section on Nervous and Mental Diseases.* "Postural Myoneuralgia: Integration of the Acroparesthesia Syndromes," Dr. Donald A. Johnson; "Cerebrospinal Fluid Glutamic Oxalacetic Transaminase (GOT) and Lactic Acid Dehydrogenase (LDH) Activities in Neurologic Diseases," Drs. Joseph B. Green, Henry A. Oldewurtel, Desmond S. O'Doherty, and Francis M. Forster.

*Section on Obstetrics and Gynecology* in joint session with the *Section on Pediatrics.* "Surgical Complications of Pregnancy," Dr. Robert H. Barter.

*Section on Ophthalmology.* "Acrylic Lenses in the Anterior Chamber: Experimental Studies in Animals," Drs. J. H. King, Jr., and Lt. Col. Raymond A. Skeehan, Jr., MC, USA: "Conservatism in the Treatment of Congenital Cataract," Drs. Frank D. Costenbader and Dan G. Albert.

*Section on Pathology and Physiology.* "Use of Chromium-51 Tagged Red Cells in Differentiation of Hypersplenism," Dr. Oscar B. Hunter, Jr.; "Brucellosis and Heart Disease: IV. The Etiology of Calcific Aortic Stenosis," Dr. Thomas M. Peery.

*Section on Preventive Medicine* in joint meeting with the American Association of Public Health Physicians. "Health Problems of the Aging: A Challenge to Preventive Medicine," Dr. Leroy E. Burney.

*Section on Gastroenterology and Proctology.* Dr. Alejandro F. Castro participated in a Panel Discussion on Regional Enteritis.

*Section on Laryngology, Otology and Rhinology.* "The Diagnostic Significance of Fullness in the Ear," Dr. Victor R. Alfaro.

Among those who discussed scientific papers were Drs. S. N. Albert, Raymond A. Osbourn, Sidney Olansky, John P. Utz, Charles E. Rath, Jr., J. Peter Murphy, Francis M. Forster, Lorenz Zimmerman, Milton C. Cobey, Charles D. Shields, A. B. C. Knudson, William P. Herbst, Jr., William T. Spence, Kenneth R. Nelson, and Frank B. Berry.

The Medical Society was well represented in the Scientific Exhibit, as the following list indicates:

Exhibit Symposium on Arthritis and Rheumatism. "The Hands in Arthritis and Related Conditions," Rheumatology Clinic, Georgetown University Hospital: Dr. Darrell C. Crain, Director, and Drs. Elbert T. Phelps, James A. Kehoe, Joseph A. Kiesel, Antoinette Popovici, Milton C. Cobey, and Alan R. Crain.

Exhibit Symposium on Foods and Nutrition. "Food for Health—Nutrition Essentials," Pan American Sanitary Bureau, Regional Office of the World Health Organization: Dr. Fred L. Soper, Director.

*Section on Dermatology.* "Dermatologic Standardization of Perfumes," Drs. Raymond A. Osbourn, Thomas W. Tusing, and Francis P. Coombs, Georgetown University Medical Center.

*Section on Anesthesiology.* "A Simple Method for Blood Volume Determinations," Drs. S. N. Albert, W. O. Swan, and W. A. Spencer, D. C. General Hospital.

EXHIBIT CITED FOR EXCELLENCE AT AMA CONVENTION

This exhibit, displayed with lifelike hands, prepared by the Rheumatology Clinic of Georgetown University Hospital, received a Certificate of Merit at the recent AMA Convention in New York. DR. DARRELL C. CRAIN (right), Director of the Clinic, is pointing out an interesting detail to DR. FREDERICK HOLLENBERG of Middletown, N. J.

*Section on Experimental Medicine and Therapeutics.* "A New Antithrombotic Agent," Drs. Benjamin Manchester and Lawrence E. Putnam, George Washington University School of Medicine and D. C. General Hospital.

*Section on General Practice.* "Headache Clinic," Drs. Lester S. Blumenthal and Marvin Fuchs, George Washington University.

*Section on Military Medicine.* "Psychiatry in the U. S. Navy's Operation Deep Freeze," Dr. George N. Raines, Bureau of Medicine and Surgery, Washington, and Drs. J. E. Nardini and Herman B. Molish, U. S. Naval Hospital, Bethesda, Md.

*Section on Pathology and Physiology.* "Brucellosis and the Heart: A New Concept of the Etiology of Valvular Heart Disease," Drs. Thomas M. Peery and Roger H. Shannon, George Washington University School of Medicine; "Myocarditis: A Frequent Complication in Systemic Disease," Dr. William C. Manion, Armed Forces Institute of Pathology.

*Section on Internal Medicine.* "Soft Tissue Injection of Musculoskeletal Conditions: Use of Prednisolone Tertiary Butylacetate and Hexylcaine Hydrochloride," Dr. Eugene G. Lipow, George Washington University School of Medicine, and Drs. Kenneth M. Kron and Richard T. Smith, Benjamin Franklin Clinic, Philadelphia.

Certificates of Merit were presented to Dr. Crain and to Dr. Manion for their exhibits. Dr. Crain's display also won the AMA's new award for the best in artistic presentation.

Drs. Francis M. Forster and Bushnell Smith took part in the motion picture program. Their movie was entitled, "Modern Concepts of Epilepsy."

Dr. Milton L. Goldman took honors in the Physicians' Art Exhibit in competition with physicians who have been painting less than three years. His "Harpers Ferry" won first prize among oil landscapes. A crayon drawing took a blue ribbon among drawings and pastels, and his "Madonna" received second prize in the oil portrait category.

Mr. Wiprud, Secretary, and Mr. Lawrence A. Zupan, Assistant Secretary, of the Medical Society, attended the Medical Society Executives Conference at the Belmont Plaza, May 31–June 1. Mr. Wiprud also attended the Conference of Presidents and Other Officers of State Medical Associations, which held its 13th Annual Meeting at the Waldorf-Astoria, June 2. Mr. Wiprud has served on its Executive Committee.

PHYSICIAN-ARTIST AND HIS PAINTINGS

Dr. Milton L. Goldman, an artist for less than 3 years, displays the paintings which received two first prizes and one second prize in the Physicians' Art Exhibit at the AMA Convention.

A number of other medical organizations scheduled meetings before and after the AMA meeting. The American College of Chest Physicians held its 23rd Annual Meeting at the Hotel Commodore, May 29–June 2. The following papers were presented by members of the District Medical Society: "The Future of Cardiac Surgery," Dr. Edgar W. Davis; "Cardiorespiratory Studies in Hamman-Rich Syndrome," Drs. Peter Luchsinger, Sol Katz, Georges McCormick, and Robert Donohoe.

Two Washington physicians led Fireside Conferences: Congestive Heart Failure—Dr. Benjamin Manchester, and Fungus Infections—Dr. Joseph W. Peabody, Jr.

Drs. Katz and Charles A. Hufnagel were moderators for two Round Table Lunchons, and Dr. Roy G. Klepser discussed a paper presented by Toronto physicians on "The Treatent of Spontaneous Pneumothorax with Kaolin."

Members of the American Therapeutic Society convened at the Essex House over a 4-day period, beginning May 30, to observe their 58th Annual Meeting. Dr. Oscar B. Hunter, Jr., gave his Secretary's Report at the first business session, May 31. At this meeting obituaries of Dr. William J. Mallory and Dr. Valentine M. Hess, deceased members, were presented by Dr. Arnold McNitt and Dr. James I. Boyd, respectively.

Papers presented by Washington physicians were:

"Control of Serum Cholesterol by Experimental Diets," Dr. Alan F. Kreglow.

"The Effects of Midbrain and Spinal Cord Transection on Endocrine and Metabolic Function," Dr. William T. Spence.

"Clinical Observations in the Experimental Use of Oral Medications in the Treatment of Diabetes Mellitus," Drs. Maurice Protas and William Kurstin.

Dr. Robert Wallace Wilkins, President-elect of the American Heart Association and Professor of Medicine, Boston University School of Medicine, gave the Third Oscar B. Hunter Memorial Lecture. The subject was "From Snake Root to Serotonin."

## MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, May 27, 1957, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

*Active Members*

Clift P. Berger, 3515 North 25th Street, Arlington, Va.
David M. French, 3809 17th Street, N.E.
Julian W. Giles, 4645 Deane Avenue, N.E.
Stanley J. Haberek, Providence Hospital
Charles H. Hunter, 2001 Benning Road, N.E.
Benjamin Jones, Jr., 1835 Kalorama Road, N.W.
Cervera R. Little, 1705 Webster Street, N.W.
Babgen Mangasarian, 3825 Davis Place, N.W.

J. Malcolm McNeill, 4207 Arkansas Avenue, N.W.
Jorge B. Morales, Providence Hospital
James R. Nugent, 3904 Edmunds Street, N.W.
Burke Syphax, Freedmen's Hospital
C. Allen Wall, 1414 Underwood Street, N.W.

*Associate Members*

Aims C. McGuinness, Department of Health, Education, and Welfare
Irwin L. V. Norman, 5314 Moorland Lane, Bethesda, Md.
Herbert L. Tanenbaum, 5500 Chillum Place, N.E.
Harold S. Tidler, Good Luck Road, Lanham, Md.
Myron E. Wegman, 1501 New Hampshire Avenue, N.W.

*Resident-Intern Members*

Richard B. Perry, 2316 41st Street, N.W.
Elroy Young, 128 V Street, N.W.

The following applicants for membership will be voted on at the meeting of the Executive Board, August 26, 1957.

*For Active Membership*

Ernest Lee Braddock, Meharry Medical College—1950
Dorothy R. M. Brodie, George Washington University—1953
Donald A. Brooks, Howard University—1950
Salvador J. Cosimano, Jr., Georgetown University—1952
David S. Davis, George Washington University—1953
Jerome H. Epstein, George Washington University—1953
Louis E. Fettig, Hahnemann Medical College—1947
James C. Gray, Howard University—1941
John J. Hughes, New York Medical College—1952
George W. Metcalf, University of Texas—1949
Ping-nie Pao, National Medical College of Shanghai, China—1947
Bernard F. Peacock, Georgetown University—1950
Melvin W. Sandmeyer, George Washington University—1953
Joseph W. Siewick, Georgetown University—1952
William A. Spencer, Columbia University—1945
Frank J. Talbot, Georgetown University—1953
John W. Uzmann, Georgetown University—1945
Nan Van Wagenen, Temple University—1952
William J. Washington, Jr., Howard University—1947

*For Associate Membership*

Habeeb Bacchus, George Washington University—1954
John J. Canary, Georgetown University—1951
John Colen, State University of Leiden, The Netherlands—1950
Edward C. McGarry, George Washington University—1947
William J. Mitchell, Georgetown University—1955
John D. Porterfield, Rush Medical College—1938
Enrique Sacoto, University of Cenca, Ecuador—1951

*For Affiliate Membership*

Horace W. Bernton, Georgetown University—1952

*For Resident-Intern Membership*

Henry DeCosta Bell, Howard University—1954
Gregory T. Henesy, George Washington University—1952
Walter H. Morris, Howard University—1952

## CORRESPONDENCE

To the Editor:

### The Chronic Alcoholic

I should like to comment on Dr. James Gannon's article, "The Problem of the Chronic Alcoholic."

It has been found that suicide attempts among alcoholics are half as successful as those in the general population.[1] Crimes of violence are relatively rare among chronic alcoholics.

It is also true that a drinking bout may be a substitute for a psychotic episode,[2] or, vice versa, in those patients on Antabuse. Most alcoholics suffer from excess superego values of guilt and general self-criticism. When these feelings increase in intensity, anxiety starts. Unless someone can reassure the alcoholic that he is worthwhile (support the weak ego against superego attack), anxiety becomes panic, then confusion, and some sort of psychotic episode may follow.

Whiskey allows a dissipation of the self-hate (superego values). The alcoholic can profane everything and everybody when he is drunk.

Dr. Gannon says: "The real reason for the cure lies in his [the patient's] mental attitude toward alcohol." The word life should be substituted for alcohol. Giving up alcohol only means that the patient has found a reason or reasons to try again for some solution of his problems of relating to people. Sobriety is the beginning of a bitter struggle to the capability of assigning proper importance to life values in other people and in himself. Menninger says: "Alcoholism is a form of slow suicide used to avert greater self-destruction." Thus sobriety signifies only a decision to try to live.

Abstinence may come about when the results of drinking are more painful than the underlying emotional state of anxiety or depression, or both. Unfortunately, the disasters of alcoholism deter only a few patients. Most cannot stop until they realize, either through Alcoholics Anonymous, the clergy, a benevolent physician or a friend, that there is at least one person who understands, tolerates and cares sincerely about their fate.

What Dr. Gannon cites in his paper as being alibis are, in fact, precipitating factors. Business reverses are taken personally because of a preëxistent low self-esteem, common to all alcoholics. Such failures confirm the patient's opinion of himself that he is no good. An unhappy marriage, nearly always to a severely neurotic woman who is unable to give much of herself, again proves to the alcoholic that he is no good, not wanted.

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[1] Moore, M.: J. Nerv. & Ment. Dis., 1939, **90**, 381.

[2] Conn. Rev. on Alcoholism, 1955, **7**, no. 4.

Even the loss of a friendly, understanding boss can be so threatening to the lonesome, affection-starved alcoholic that he goes on a bender. These superficial insights, used and explored in psychotherapy, can lead to a better understanding of why the patient's happiness is entirely dependent on a few persons or on only one person.

I have encountered many alcoholics who accept events which are very unpleasant to any of us as merely excuses for getting drunk. This adds to their self-castigation and their alcoholism. They are too often told that they are weak-willed, and turn even more against themselves. This is similar to telling the luetic that his disease is due to immoral feelings—his inability to resist pleasures of the flesh. The basis of their illness is their being against themselves.

The alcoholic is not allergic to alcohol, but supersensitive to rejection. Any action which is not positive affection or interest in him becomes rejection and confirms his theme song, "I am no good, not wanted." One of my patients, a wife, mother and talented artist, said: "I sit at home on weekends with my only real friend, the bottle."

S. A. STEINER, M.D.

WASHINGTON, D. C., June 14, 1957

TO THE EDITOR:

Litigation involving personal injury is increasing as automobiles become larger, speedier, and more numerous. The need for honest medical testimony in court is proportionately more important, because generous juries are awarding larger and larger verdicts in favor of injured persons, and the importance of unbiased medical testimony on both sides at the trial should be realized.

The function of the doctor is to advise the court and the jury of medical facts which are in his possession and his conclusions therefrom, and to allow the "chips to fall where they may." Thousands of dollars depend upon medical testimony. Court formality often prevents the doctor from explaining fully what he wishes to convey to the members of the jury and, unless his attorney is astute, he may leave them under a false impression.

The doctor employed as a witness for the plaintiff and the doctor who is employed by the defendant should consult with each other prior to the trial and agree on those facts which can be reconciled. This procedure would increase the regard of the legal fraternity for medical testimony and lessen the confusion of the jury.

The fee for expert medical testimony should be based on the experience of the doctor, the time consumed in preparation for trial (examining his own and the lawyer's records, reading for refreshment, lawyer consultations, etc.), and the number of days between the one on which he is alerted and the actual time he is called to the stand. During this period the doctor must keep in constant touch with his office and be prepared to respond immediately, regardless of his occupation at that time. Of course, the time he is away from his office on the day of the trial must be considered. No ethical medical witness will agree to a contingent fee, for obvious reasons.

Some lawyers offend against the rules of ordinary courtesy by failing to notify the doctor of a settlement out of court after the doctor has been alerted, thus adding to the doctor's inconvenience.

Friendliness, respect and consideration between doctors and lawyers are increasing, but there is still room for improvement.

Very truly,
JAMES A. GANNON, M.D.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**William Harvey, His Life and Times: His Discoveries: His Methods.** LOUIS CHAUVOIS. Foreword by Sir Zachary Cope. Price, $7.50. Pp. 271. New York: Philos. Libr., 1957.

**Epilepsy—Grand Mal, Petit Mal, Convulsions.** LETITIA FAIRFIELD, C.B.E., M.D., D.P.H. Price, $4.75. Pp. 159. New York: Philos. Libr., 1957.

**A Woman Doctor Looks at Love and Life.** MARION HILLIARD, M.D., Chief of Obstetrics and Gynecology, Women's College Hospital, Toronto, Canada. Price, $2.95. Pp. 190. New York: Doubleday, 1957.

**The Principles and Methods of Physical Diagnosis. Correlation of Physical Signs with Certain Physiological and Pathological Changes in Disease,** 2nd edition. With a Chapter on Sounds from the Thorax: Acoustic Principles by S. Reid Warren, Jr., Sc.D. in E.E., Professor of Electrical Engineering, the Moore School of Electrical Engineering, University of

(*Continued on page 391*)

# News and Personals

## MEETINGS

**The American College of Cardiology** held its Sixth Annual Meeting at the Willard Hotel in Washington, May 15–18, 1957, with some 600 physicians in attendance. Dr. Irving Brotman and Dr. George W. Calver were Chairman and Co-chairman, respectively, of the local Convention Committee. Dr. Brotman was moderator of a Symposium on Pericarditis with Effusion and Constrictive Pericarditis, May 16, and Dr. Calver, moderator of a Symposium on Diagnostic Methods the same day.

Dr. Calver, who is physician to Congress, is the new President-elect of the College and will take office next year.

Top ranking officials of the Armed Forces greeted those present for the sessions. Among those who offered felicitations were several Honorary members of the Medical Society: Dr. Frank B. Berry, Assistant Secretary of Defense for Health and Medicine; Major General S. B. Hays, Surgeon General of the Army; Rear Admiral B. W. Hogan, Surgeon General of the Navy; and Major General D. C. Ogle, Surgeon General of the Air Force. Dr. LeRoy E. Burney, Surgeon General of the Public Health Service, gave the introductory remarks for a Symposium on Open Heart Surgery.

At the first scientific session, May 15, Dr. Leslie H. French took part in a Seminar on Electrocardiography and Vectorcardiography. Dr. French also participated in a Fireside Conference on Pulmonary Edema. Dr. Benjamin Manchester likewise led a Fireside Conference on Anticoagulant Therapy.

Dr. Charles A. Hufnagel and Dr. Bernard J. Walsh gave clinical demonstrations on May 18: Surgery of Congenital and Acquired Heart Disease and Arterial Grafts (Dr. Hufnagel) and Clinic on Pediatric Cardiology (Dr. Walsh). Dr. Walsh, who is President of the Washington Heart Association, made some welcoming remarks at the first scientific session.

The Medical Society's **Section on Neurology and Psychiatry** met in the Medical Society's library, June 6. Dr. Luis Sanchez-Longo presented a paper on "Bilateral Ulnar Palsy." Members also viewed a movie on "Myasthenia Gravis."

**Medical Alumni Day** was observed at **Georgetown University School of Medicine,** June 8. The Distinguished Alumni Lecture was given by Colonel Thomas W. Mattingly, a 1930 Georgetown medical graduate, who is cardiologist at Walter Reed Army Medical Center. Colonel Mattingly is presently serving Georgetown as Associate Clinical Professor of Medicine.

Lectures were also given by: Dr. Charles D. Shields, Associate Dean of Medicine, on "Physical Medicine and Rehabilitation"; Dr. John C. Rose, Assistant Professor of Medicine, on "The Circulation Studies with an Artificial Heart Pump"; and Dr. Robert J. Coffey, Professor of Surgery, on "Duodenal Ulcers." Luncheon speaker was Dr. James A. Gannon, of the Class of 1906.

**The Washington Psychoanalytic Society** elected the following officers to serve for 2 years at its Annual Business Meeting, May 17:

Dr. Alexander Halperin, *President*; Dr. Winifred G. Whitman, *Vice President*; Dr. Sidney Berman, *Secretary*; Dr. Eugene R. Inwood, *Treasurer*; Drs. Douglas Noble and Leslie H. Farber, *members of the Executive Council.*

Dr. Dexter M. Bullard was elected to represent the Society in the Executive Council of the American Psychoanalytic Association. Dr. Noble was named alternate representative.

**The Allergy Society of the District of Columbia** was founded on May 22, 1957. The following officers were installed:

Dr. Alvin Seltzer, *President*; Dr. Ellis April, *Vice President*; Dr. Marvin Fuchs, *Secretary-Treasurer*; Drs. Harry S. Bernton and William A. Howard, *members of the Executive Committee.*

Organizations interested in affiliating with the new Society and prospective applicants for membership should communicate with Dr. Fuchs at 5315 Connecticut Avenue, N.W., Washington 15, D. C.

**The Scientific Council of the Washington Heart Association** met in the Sternberg Auditorium of the Walter Reed Army Institute of Research on May 22. Colonel Thomas W. Mattingly, of the Cardiology Service at Walter Reed, was moderator for the program. The following papers were presented by members of the staff:

"Clinical Reports of Tricuspid Valve Disease," Major Robert J. Hall; "Comments on the Surgical Repair of Patent Ductus Arteriosus and Coarctation of the Aorta," Major Edward J. Jahnke, Jr.; "Acute Dissection of the Aorta," Lt. Colonel William G. Thalmann; and "The Egg in Infancy and Childhood," Lt. Colonel Samuel H. Sandifer.

**The 55th Annual Dinner Meeting of the District Tuberculosis Association** was held at the National Press Club, May 13. The principal speaker was Dr. Edward T. Blomquist, Chief of the Public Health Service tuberculosis program.

Five new members were elected to the Board of Trustees at this meeting. Among those reëlected was Dr. Margaret M. Nicholson.

**The District Trudeau Society,** the Association's Medical Section, elected the following officers:

Dr. Otis R. Farley, *President*; Dr. Luther Terry, *President-elect*; Dr. K. Albert Harden, *Vice President*; and Dr. Milton Gusack, *Secretary-Treasurer.*

**The Mid-Atlantic Chapter of the American Medical Writers' Association** held its spring meeting at the National Press Club. Dr. I. Phillips Frohman, President of the Chapter, presided. Dr. Graham P. DuShane, Editor of *Science*, gave an excellent address on how the editor of a scientific publication solves his problems.

**The Providence Hospital Alumni Association** held its annual outing, May 16, at the Kenwood Country Club, with 224 physicians and guests present. At the dinner which followed an afternoon of sports events, golf trophies were awarded to Drs. Francis Crilley, Luther Gray and Steven Oristian. The guest speaker was Jack Lavell, scout for the New York Football Giants and Public Relations Director of the New York Baseball Giants.

## GENERAL NEWS

**The Executive Board of the Medical Society of the District of Columbia** held its regular meeting on May 27, 1957. The Board authorized a contribution of $25, as in the past, to the National Society for Medical Research. The request for funds came from its President, Dr. Lester P. Dragstedt, who stated that the need for funds to carry on the work of the organization was urgent.

Since the contract in connection with the Dependents' Medical Care program was to expire on June 30, 1957, the Board authorized the President and Secretary of the Society to sign a Supplemental Agreement, which will be effective until the Office for Dependents' Medical Care is equipped to handle negotiations for a new and revised contract.

Dr. James E. Chapman, Chairman, and Dr. Edwin C. Mitchell, of the Committee on Emergency Medical Service of the Washington Metropolitan Area, were invited to appear before the Board to discuss the progress made by the Medical Emergency Disaster Service (MEDS). At the conclusion of their presentation, the Board endorsed the emergency program sponsored by the Committee and commended Drs. Chapman and Mitchell for their efforts.

The Board approved President Caulk's reappointment of Dr. Irving Burka to serve for another year as the Society's delegate to the Board of Trustees of United Community Services.

In a communication dated May 9, 1957, Dr. Francis M. Forster, Dean of the School of Medicine of Georgetown University, submitted the name of Dr. Irving B. Brick as the institution's choice for consulting editor to the MEDICAL ANNALS.

The Board endorsed the selection, submitted by the Committee on Public Information, of the Junior League of Washington to receive the John Benjamin Nichols Award for 1957 at the Society's ANNUAL SCIENTIFIC ASSEMBLY in the fall.

**The Medical Council of the Washington Metropolitan Area** was organized at the Mayflower Hotel, June 17, by representatives of the medical societies in the Washington area. The purpose of the Council is to consider medical problems of mutual interest to the public and to physicians in the various communities represented. Participating societies will not be governed by actions of the Council unless ratified by them. Among the subjects discussed at the first meeting was the Medicare Program and the Poliomyelitis Program.

Membership in the Council consists of the following representatives from each organization: President, Past President, President-elect, and the lay executive. At the initial meeting, those attending from the District of Columbia Medical Society were Dr. Ralph M. Caulk, President; Dr. W. Ross Morris, Past President; Dr. James W. Watts, President-elect; and Theodore Wiprud and Lawrence A. Zupan, Secretary and Assistant Secretary, respectively.

Dr. Caulk was named Chairman for the ensuing year. Dr. Haskins H. Ferrell, Jr., President of the Alexandria City Medical Society, was elected Vice President, and Mr. Wiprud, Secretary. In addition to the District Medical Society, representatives were present from Montgomery County and Prince Georges County, of Maryland, and the Arlington County, Fairfax County, and Alexandria City Medical Societies of Virginia.

**Dr. Marvin E. Perkins,** Chief of the Psychiatric Services Division, **D. C. Department of Public Health,** announces the appointment of Dr. George W. Metcalf and Dr. George Chornesky to his staff. Dr. Metcalf will be Chief of the Adult Mental Health Clinic, Mental Health Division, located at 3246 P Street, N.W. Dr. Chornesky will be staff psychiatrist in the Legal Psychiatric Services Division, located in the U.S. District Court House.

Dr. Metcalf is a graduate of the University of Texas Medical School at Galveston and a diplomate of the American Board of Psychiatry and Neurology. He interned at the U.S. Marine Hospital in Cleveland, 1949–50, and is a commissioned officer of the Public Health Service.

Dr. Chornesky, a native of Lynn, Mass., went to Switzerland for his medical training, receiving his degree from the University of Geneva in 1951. After serving as intern and resident physician at the Worcester State Hospital in Worcester, Mass., he continued on the staff as junior and senior physician until 1956. He also served on the psychiatric staff of Tufts University School of Medicine until he became staff physician at St. Elizabeths Hospital in July 1956.

At the new **Washington Hospital Center** Dr. J. Ogle Warfield, Jr., will be Administrative Chairman of the Department of Surgery. Dr. Warfield is attending surgeon at Garfield, Children's and Arlington County Hospitals and has maintained a surgical practice in Washington since 1926.

Heading up the Department of Otolaryngology at the Center will be Dr. Joel N. Novick, who is presently senior attending surgeon at Episcopal Eye, Ear and Throat Hospital. Dr. P. S. Constantinople will be Vice Chairman, and Dr. H. K. Vann, Secretary.

The Central Committee of the **World Congress of Gastroenterology** has selected **Dr. Irving B. Brick** to serve as a representative of its Section on Scientific Exhibits and Motion Pictures. The World Congress of Gastroenterology will meet in Washington, D. C., May 25 to May 31, 1958. Members of the District Medical Society are invited to submit applications for display of scientific exhibits and motion pictures at the World Congress. The deadline for submission of such applications is the first week in November, 1957. The applications can be addressed to Dr. Brick at Georgetown University School of Medicine.

Ground-breaking ceremonies at **Eastern Dispensary and Casualty Hospital,** which were held on May 16, 1957, marked the beginning of its new, 100-bed addition, to be built at an estimated cost of $3,513,504. This will be the first addition to the Hospital since 1928. Scheduled for completion in the fall of 1958, it will bring Casualty's total bed capacity up to 238. Wielder of the spade was 12-year old Michael Rector, Casualty's number 1 patient, who received Nation-wide attention while recovering from burns which covered over 70 per cent of his body.

## PERSONALS

**Dr. Preston A. McLendon,** Washington pediatrician and Past President of the District Medical Society, was named a member of the District of Columbia Board of Education by a committee of District Court judges, June 19.

*Dr. McLendon*

Dr. McLendon has practiced medicine in Washington for more than 30 years, and through his community activities is well known both in and out of the profession. He is Professor of Pediatrics at George Washington University School of Medicine and attending physician at Children's Hospital. He is Chairman of the Council on Rehabilitation, a community project under the sponsorship of the medical societies of the Washngton Metropolitan Area. He is a member of the D. C. Commissioners' Youth Council and Chairman of the Committee on Juvenile Delinquency of the American Academy of Pediatrics.

Dr. McLendon succeeds Mr. C. Melvin Sharpe, who was not a candidate for reappointment.

**Dr. Walter A. Bloedorn,** who retires as Dean of Medicine of George Washington University School of Medicine, August 1, has been feted recently at two testimonial dinners.

On the first occasion, May 22, in the Terrace Banquet Room of the Shoreham Hotel, he was honored for 30 years of service to the University, the community and medicine. Some 250 guests were present, including Supreme Court Justices Felix Frankfurter and Thomas C. Clark.

Dr. Winfred Overholser, Professor of Psychiatry at George Washington University and Superintendent of St. Elizabeths Hospital, presided at the dinner. He called upon Dr. Charles S. Coakley, Professor of Anesthesiology at the University, to speak in behalf of the alumni and faculty. In later speeches, Mr. Robert V. Fleming represented the University's Board of Trustees, of which he is chairman, and the Honorable Joseph H. Himes, President of Group Hospitalization, Inc., spoke in behalf of the community.

The highlight of the evening was the presentation to the University of an oil protrait of Dean Bloedorn, the work of a New York artist, William F. Draper. Dr. Jack Kleh, Chairman of the dinner committee, presented the portrait, a gift of the honoree's associates and former students, to the University; it was accepted by President Cloyd Heck Marvin. It will hang in the Conference Room of the University Hospital.

As a personal memento of the evening, Dr. Bloedorn received a bound volume of congratulatory letters from former students all over the world.

The University Medical School's executive faculty held its dinner, June 18, also at the Shoreham Hotel. Tributes were paid to the medical educator by Dr. Overholser, Mr. Fleming, Dr. Oswald S. Colclough, Dean of Faculties, and Dr. John Parks, Dean Bloedorn's successor. Dr. Joseph H. Roe, executive officer of the Department of Biochemistry, was toastmaster.

Dr. Chester E. Leese, chairman of arrangements for the dinner, presented Dr. Bloedorn with a complete fishing outfit on behalf of the executive faculty.

**Dr. Jacob J. Weinstein,** Associate in Surgery, George Washington University, was installed as President of the International Academy of Proctology at its Ninth Annual Convention, held in New York at the Hotel Plaza, April 29–May 2.

The organization is primarily a teaching group mainly interested in the education and the development of coloproctology. Presently it has a membership of 1,000 physicians from all parts of the United States and from many foreign countries. The next meeting of the Academy will be held in Mexico in the spring of 1958.

**Dr. John A. Reed** was elected President of the American Diabetes Association at its 17th Annual Meeting, June 2, at the Hotel Commodore, in New York City. Dr. Reed is Assistant Clinical Professor of Medicine at George Washington University School of Medicine, consultant in diabetes to Doctors Hospital, and Chairman of the Board of Surgeons and

DR. KLEH HONORED BY JAYCEES

DR. JACK KLEH (left), Medical Director of D. C. Village, has just received the Melvin C. Hazen Award of the Junior Chamber of Commerce for his work in geriatrics and in behalf of delinquent children from D. C. COMMISSIONER DAVID B. KARRICK, at a luncheon, June 13. In the center is DANIEL C. BELL, President ot the American Security and Trust Company, co-sponsor of the award.

Physicians of the D. C. Police and Fire Departments. Dr. Reed has taken a very active role in the work of the American Diabetes Association since its organization, having served 2 terms as Vice President and 6 years as Secretary.

**Dr. Jack Kleh,** Medical Consultant to the District Welfare Department, was chosen to receive the fourth annual Melvin C. Hazen Award by the Junior Chamber of Commerce. The award is co-sponsored by the Junior Chamber and the American Security and Trust Company. Dr. Kleh, Medical Director of the District of Columbia Village, was honored at a luncheon, June 13, for his outstanding contributions in the field of geriatrics and for his work on behalf of retarded and delinquent children.

**Dr. William B. Walsh and Dr. C. Willard Camalier** have been named by President Eisenhower to the newly formed President's Citizens Advisory Committee on the Fitness of American Youth. Dr. Camalier, Associate member of the District Medical Society, is Assistant Secretary and Past President of the American Dental Association. The Committee's first meeting will be held, September 9 and 10, at the U. S. Military Academy, with Vice President Nixon scheduled to preside.

**Dr. Hugh H. Hussey,** Professor of Medicine, Georgetown University School of Medicine, and a member of the Board of Trustees of the American Medical Association, was appointed by Dr. Leroy E. Burney, Surgeon General of the Public Health Service, to serve on an advisory committee of physicians and health officers to consider precautionary steps in the United States against the current influenza epidemic in the Far East.

**Dr. George E. Schreiner,** Assistant Professor of Medicine, Georgetown University School of Medicine, and Director of the Renal Clinic at Georgetown Hospital, was elected national Secretary of the American Society for Artificial Internal Organs at its Annual Meeting at the Conrad Hilton Hotel in Chicago, April 14–15.

On May 5 he was elected National Councillor for the American Federation for Clinical Research at its meeting in Atlantic City, N. J. The following day he was elected to membership in the American Society for Clinical Investigation, which also held its annual meeting at the Steel Pier in Atlantic City.

**Dr. Sanford Leikin,** Clinical Instructor in Pediatrics, **and Dr. William P. McKelway,** Clinical Instructor in Obstetrics and Gynecology, both of George Washington University, have received checks in the amount of $4,500 and $3,500, respectively, from the District Cancer Aid Group which will enable them to carry out research projects in cancer. The checks were presented to the recipients in ceremonies at the B'nai Israel Congregation, May 20.

Dr. Leikin will conduct his research in the field of hematology at Children's Hospital. Dr. McKelway will spend a year in New York studying cancer in the field of gynecology.

**Dr. Harry S. Bernton** has been named Regional Vice Chairman of the American Foundation of Allergic Diseases. This Foundation is organized to educate the public in a better understanding of allergic diseases and to further research and training in this field.

**Dr. Zigmond M. Lebensohn** was invited to attend the meeting of the Council on Mental Health of the American Medical Association in Boston, June 2, where he assisted in formulating a statement on the medical uses of hypnosis.

**Dr. R. Lomax Wells,** Medical Director of the Cheseapeake and Potomac Telephone Companies, was elected Vice President and President-elect of the Medical Alumni Association of the University of Virginia, June 7. Recently he was elected a member of the Royal Society of Health of London, England.

## EUGENE RANDOLPH WHITMORE, B.S., M.D., Ph.D., F.A.C.P.

## (1874–1957)

Dr. Eugene Randolph Whitmore, eminent pathologist and medical educator, died May 4, 1957, in Walter Reed Army Hospital.

Dr. Whitmore was born to Eugene and Rosena C. Whitmore, June 18, 1874, in Lancaster, Wisconsin. He attended the public schools in Lancaster and received the degree of Bachelor of Science from the University of Wisconsin in 1896. In 1899 he graduated in medicine from the University of Illinois in Chicago. He enrolled for postgraduate study in tropical diseases at the London School of Tropical Medicine in 1905, in pathology at the University of Vienna in 1906, and in parasitology at Koch's Institute in Berlin in 1911–12.

He was commissioned in the United States Army directly after his internship at Cook County Hospital in Chicago. During his Army career he served as Professor of Bacteriology and Pathology in the Army Medical School (1913–19), also Professor of Tropical Medicine; Curator of the Army Medical Museum (1913–15), and pathologist at the Bureau of Science in Manila, P. I. (1908–10). A veteran of the Spanish-American War and World War I, he retired from the Army with the rank of Colonel in 1920.

Colonel Whitmore served for four years as Professor of Bacteriology and Preventive Medicine at George Washington University School of Medicine (1920–24), and from 1924 as Professor and Head of the Department of Parasitology and Pathology at Georgetown University School of Medicine. In 1929 Georgetown conferred upon him the degree of Doctor of Philosophy. He held Emeritus status at Georgetown at the time of his death.

For many years he was head of the Department of Pathology and Radiology at Gallinger Municipal Hospital (now D. C. General Hospital) and consultant in parasitology and tropical diseases to Doctors and Emergency Hospitals. He was senior pathologist and consultant at Casualty Hospital for the last 11 years, although technically retired, and formerly director of its pathology laboratories.

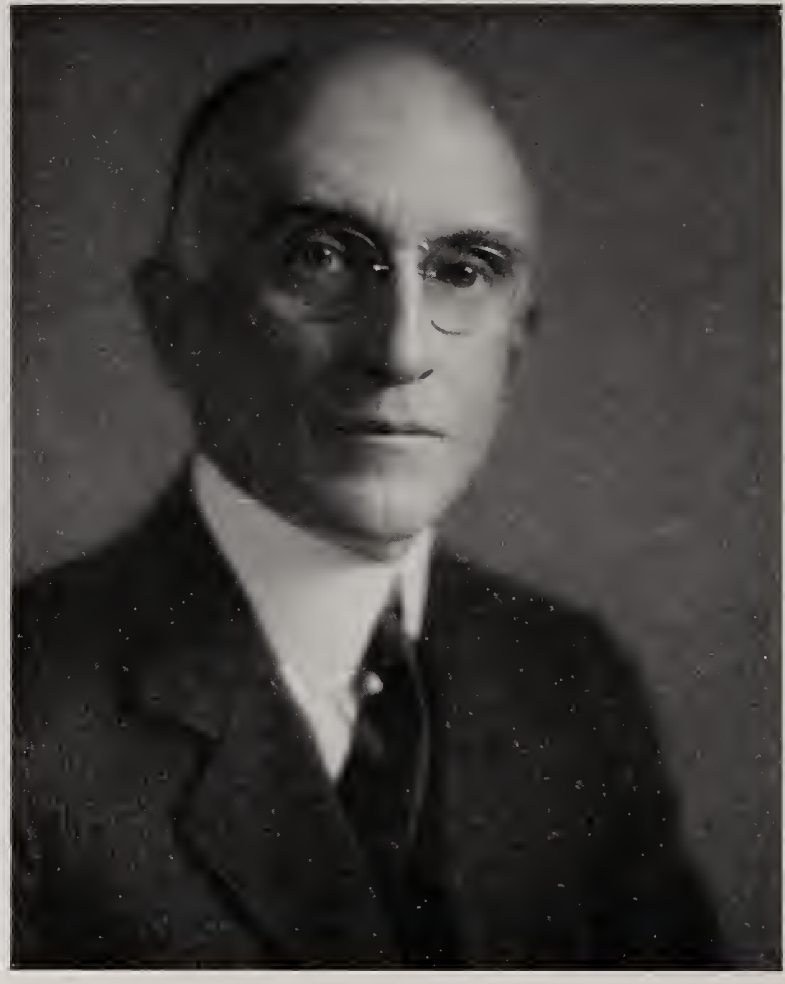
Colonel Whitmore was a diplomate of the American Board of Pathology; Fellow of the American College of Physicians, American Society of Clinical Pathologists, and American Association for the Advancement of Science; Secretary for many years of the American Association for Study of Neoplastic Diseases; member of the American Association of Pathologists and Bacteriologists, American Society of Tropical Medicine and Hygiene, Association of Military Surgeons of the United States, Southern Medical Association, and the American Medical Association. Dr. Whitmore was elected to Associate membership in the Medical Society in 1914 and to Active membership in 1924. He was also a member of the Washington Society of Pathologists, the George Washington University Medical Society, the Pan-American Medical Society, the Cosmos Club, the Army-Navy Town and Country Clubs, and others. He had contributed numerous articles to the medical literature.

For 20 years he had taught a men's Bible Class at St. Paul's Lutheran Church.

He is survived by his wife, Mrs. Josephine Baker Whitmore, of 2139 Wyoming Avenue, N.W., and a sister, Mrs. Paul Humphrey, of Horicon, Wisconsin.

# WILLIAM HITE HOUGH, M.D.

## (1877–1957)



Dr. William H. Hough, Past President and Life member of the Medical Society of the District of Columbia, died, May 26, 1957, in DeLand, Florida, where he had lived since retiring five years ago. He had maintained offices in the Farragut Medical Building in Washington for many years.

Dr. Hough, a native of Waterford, Va., was born, October 31, 1877, a descendant of one of the first families to settle in the Shenandoah Valley. His parents moved to Washington when Dr. Hough was a child.

He obtained his medical degree from Georgetown University School of Medicine in 1904. He interned at St. Elizabeths Hospital and continued on the staff from 1904 to 1912, except for a year spent in postgraduate study in Vienna.

Dr. Hough was a specialist in syphilology and neurology. He had served as consultant in syphilology to Mt. Alto Veterans Hospital and had served on the hospital staffs of Garfield Memorial and Episcopal Eye, Ear and Throat Hospitals. For many years he was on the teaching staffs of George Washington and Georgetown University Schools of Medicine. He also contributed many articles to scientific journals.

Dr. Hough was elected a member of the Medical Society of the District of Columbia in 1905. He was President of the Society in 1930–31 and served on its Executive Committee from 1931 to 1935, the last year as Chairman. The following year he was Chairman of the Committee on Public Health.

His interests, which were many, included astronomy and politics. His hobbies were breeding fish and growing roses on his estate near Sandy Spring, Md.

Surviving him are his wife, Mrs. Louise S. Hough, of DeLand; a daughter, Miss Edith Louise Hough, of 3636 Sixteenth Street, N.W.; and a sister, Miss Ive Hough, of Baltimore.

## WILLIAM WILEY CHASE, A.B., M.D., D.Sc., F.A.C.S.

### (1901–1957)

Dr. William W. Chase, Chairman of the Department of Surgery at Garfield Memorial Hospital, died there, May 16, 1957, following a long illness. Only recently he had been elected to the post of Administrative Chairman of the Department of Surgery for the new Washington Hospital Center. His offices were at 1801 Eye Street, N.W.

Dr. Chase was born in Baltimore, Md., June 5, 1901. His parents were the Reverend John T. and Mary Elizabeth Chase. He was educated in the Baltimore public schools and graduated from Western Maryland College. He received his medical degree from the University of Maryland in 1927.

After interning at South Baltimore General Hospital, 1926–29, Dr. Chase became resident physician in surgery at Garfield Memorial Hospital, continuing on the hospital staff until his death. He was also on the staff of Homeopathic Hospital and consulting surgeon to Doctors Hospital.

During World War II, he served the Air Force as Chief of the Surgical Service at the Regional Hospital, Buckley Field, Denver. When he left the service he held the commission of Lieutenant Colonel.

He had served on the teaching staff of George Washington University as Instructor in Surgery. He was a Fellow of the American College of Surgeons, a member of the American Medical Association, Washington Academy of Surgery, and the Louis Mackall Medical Society. He had been an Active member of the District Medical Society since 1931.

He was a member of the Board of Trustees of Western Maryland College and in 1955 the College awarded him the honorary degree of Doctor of Science. He was also active in the Northminster Presbyterian Church, serving for many years on both the Board of Trustees and its building committee.

Surviving him are his wife, Mrs. Florence Meier Chase, and a son, William Wiley, Jr., of the home address, 1813 Parkside Drive, N.W. He also leaves a daughter, Miss Jeanette Chase, of Rockville, Md.; two sisters, Mrs. Beverly W. Dunning and Miss Edna M. Chase, of Baltimore; and a brother, John E. Chase, of Washington.

## EUGENE LYMAN LE MERLE, M.D.

### (1864–1957)

Dr. Eugene L. LeMerle, Washington physician for 42 years, died, June 13, 1957, at the home of his daughter, Mrs. George H. Riggs, Jr., Cherry Grove, Ashton, Maryland. In Washington he had lived at 2011 Que Street, N.W. for more than 50 years.

Dr. LeMerle was a fifth generation Washingtonian, born, November 12, 1864. His father, Augustus Eugene LeMerle, was a photographer during the Civil War with Mathew Brady. His grandfather, James H. Marr, was First Assistant Postmaster General under Abraham Lincoln.

Dr. LeMerle graduated in 1895 in dentistry and in 1897 in medicine from Columbian University (now George Washington University). From 1898 until he retired in 1940, he practiced medicine in Washington. During many of those years, he served as Chief of Contagious Diseases of the District Health Department and on the staff of Emergency Hospital.

He became a member of both the Medical Association and the Medical Society of the District of Columbia in 1902 and continued his affiliation with the latter until 1940. He was a 32nd degree Mason and a charter member of the Cathedral Lodge.

His wife, Mrs. Virginia Grace Norris LeMerle, survives him, together with his daughter, Mrs. Riggs.

## RICHARD JOSEPH KEMP, M.D.

### (1895–1957)

Dr. Richard Joseph Kemp, otolaryngologist in the Washington area for 32 years, died at the National Institutes of Health in Bethesda, May 2, 1957. He lived in Bethesda 17 years before moving to 5601 Pollard Road, Springfield, Maryland, last year.

Dr. Kemp was born, February 22, 1895, in Baltimore, Md., the son of Simon J. and Kate Worthington Kemp. He graduated from the University of Maryland School of Medicine in 1921 and served as intern and resident physician at the University of Maryland Hospital from 1921 to 1923.

In 1925, Dr. Kemp moved to Washington and became associated with the late Dr. Reginald R. Walker, who died in 1932. Dr. Kemp's offices were in the Medical Building at 1801 Eye Street, N.W. He was on the staff of Episcopal and Children's Hospitals for a number of years.

Dr. Kemp was a veteran of World War I, having served in the U. S. Naval Reserve prior to his medical training.

He assisted in organizing the Metropolitan Police Boys' Club and continued his interest in that organization over the years. He was made an Honorary Police Inspector by Major Ernest W. Brown, former Chief of Police and founder of the Boys' Club.

Dr. Kemp was a charter member of the Maryland Beta Chapter of Sigma Alpha Epsilon and a member of the Phi Chi medical fraternity. He was formerly a member of the District Medical Society.

Survivors are his wife, Mrs. Alice Haynes Kemp; two daughters, Miss Mary J. Kemp, of the home address, and Mrs. Joseph E. Johnson, III, of Honolulu, T. H.; a sister, Miss Alice Kemp, of Baltimore; and a brother, S. Worthington Kemp, of Welcome, Md.

## JAY LOUIS HOFFMAN, A.B., M.D.

### (1909–1957)

Dr. Jay Louis Hoffman, since 1953 First Assistant Physician at St. Elizabeths Hospital died May 4, 1957, at the Hospital. In charge of treatment research and education, he had recently assisted in setting up a plan for coöperative research with the National Institutes of Health.

Dr. Hoffman was born in Philadelphia, Pennsylvania, October 10, 1909. He was a graduate of the University of Pennsylvania, receiving the degree of Bachelor of Arts in 1930 and his medical degree in 1934. He interned at St. Elizabeths Hospital from 1934 to 1936, and continued on the staff until he entered the armed services as Captain in the Army Medical Corps in 1942.

Dr. Hoffman served overseas three years during World War II, mostly in England, where he was Commanding Officer of an Army psychiatric hospital. After returning to the United States, he was appointed Chief of Professional Service of the Veterans Administration Hospital in Bedford, Mass., in 1947, where he served until he returned to St. Elizabeths in 1953.

Dr. Hoffman was on the staff of George Washington University as Associate Clinical Professor of Psychiatry.

He was a diplomate of the American Board of Psychiatry and Neurology, Fellow of the American Psychiatric Association, Past President of St. Elizabeths Medical Society, and a member of the Boston Psychoanalytic Society and the Washington Psychiatric Society. He was an Associate member of the District Medical Society from 1937 until 1942.

He is survived by his wife, Mrs. Clara Hoffman, and a son, Robert L. Hoffman, a student at Harvard College.

### Treatment of Emphysema—Israel

(*Continued from page 348*)

to minimize loss of lung tissue, unroofing and suturing of the bullae is advocated by some.[8]

### CONCLUSION

The conclusion is inescapable that the treatment of chronic obstructive emphysema is unsatisfactory. Although many of the changes in the emphysematous lung are irreversible with present methods of therapy, much benefit can be secured by treatment of the infection and bronchospasm which are almost invariably present.

Oxygen, steroids and mechanical respirators are of little value in chronic emphysema but should be applied vigorously in episodes of acute respiratory acidosis.

Surgery has a limited but important role in the treatment of bullous emphysema. Isolated large bullae occurring in lungs with minimal evidence of generalized emphysema can be resected or obliterated with striking benefit in many instances.

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### Topical Hydrocortisone—Seltzer

(*Continued from page 353*)

use of local treatment, instead of undertaking definite diagnostic procedures, that many valuable clues and facts related to the onset and cause of the dermatitis may be forgotten, overlooked and lost. Topical cortisone preparations are potent drugs to be used carefully and wisely.

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2025 Eye Street, N.W.
Washington 6, D. C.

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### On the Lighter Side—Kadan

(*Continued from page 374*)

at the Louis Mackall Medical Society banquet recently were the following physicians: (and, mind you, all danced with one trouser leg rolled up beyond the knee; all minced, pranced and executed the pirouette with consummate grace even to the lifted pinkie!) Drs. Carlos A. Dominguez, rollickin' Robert D. Cawley, rambunctious Raymond E. Fenton, hilarious Hill Carter, jocund John W. Latimer, rock'n' roll Richard L. Sullivan, mincing Marshall deG. Ruffin, high-stepping Harold H. Hawfield, revolving Ronald W. Strong, galloping Garnet W. Ault, nimble-footed Norvell Belt, executing Edgar N. Brawner, morris Marcel J. Foret, nutant Noel M. Stow, frantic Frank D. Costenbader, jazzy James A. Dusbabek, ubiquitous Eugene McDonald, and hop-skip-and-jump H. Franklin Kreuzburg.

These fine dancers owe their stellar performance to a very pretty blonde dance coach with a marvelous memory, whose name escapes me.

J. Earl Kadan, M.D.

### Books Received

(*Continued from page 381*)

Pennsylvania. Simon S. Leopold, M.D., Professor of Clinical Medicine, School of Medicine and Graduate School of Medicine, University of Pennsylvania; Chief of the Thoracic Clinic, Hospital of the University of Pennsylvania. Price, $9.00. Pp. 537, with 379 illustrations and 25 color plates. Philadelphia: Saunders, 1957.

**A Textbook of Histology,** 7th edition. Alexander A. Maximow, Late Professor of Anatomy, University of Chicago, and William Bloom, Professor of Anatomy, University of Chicago. Price, $11.00. Pp. 628, with 1082 illustrations, 265 in color, on 631 figures. Philadelphia: Saunders, 1957.

**Textbook of Pathology with Clinical Applications.** Stanley L. Robbins, M.D., Associate Professor of Pathology, Boston University School of Medicine; Associate Director of the Mallory Institute of Pathology, Boston, Massachusetts; Lecturer, Harvard Medical School and Tufts University School of Medicine. Price, $18.00. Pp. 1351, with 933 figures. Philadelphia: Saunders, 1957.

**The Changing Patient-Doctor Relationship.** Martin G. Vorhaus, M.D., F.A.C.P. Drawings by A. Birnbaum. Price, $3.95. Pp. 310. New York: Horizon Press, 1957.

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# Book Reviews

**Gifford's Textbook of Ophthalmology.** Francis Heed Adler, M.D. Price, $8.00. Pp. 499, with 277 figures and 26 color plates. Philadelphia: Saunders, 1957.

In this new edition of a well known textbook, the author has carefully eliminated those phases of ophthalmology which are not of practical value for the student or general physician. In so doing, less emphasis has been placed on such fast disappearing diseases as syphilis, tuberculosis, phlyctenular keratitis, and trachoma. Certain sections from the older edition have been rewritten, some enlarged, and new ones added.

The discussion of myasthenia gravis, which has been added, and the chapter on ocular manifestations of general diseases, which has been enlarged, are of special importance to the general physician.

The section on glaucoma has been enlarged to include the newer theories of aqueous humor formation. The role of carbonic acid anhydrase is stressed and the use of Diamox is discussed. All general physicians should read the descriptions of acute narrow angle and chronic open angle glaucoma since the recognition of these entities and referral for proper treatment may save many eyes from blindness.

In the field of therapeutics, much new material has been added to keep pace with the recent developments in antibiotics, antihistaminics, and the use of corticosteroids. The misuses of these agents in ophthalmology, however, are unfortunately not discussed.

A new chapter on ocular injuries has been added which has gathered into one section a discussion dealt with under each anatomic heading in the previous edition. This has created greater unity of presentation and enables a busy practitioner to get a good picture of how he can deal with an immediate problem with greater facility.

This is an excellent and well written book. It should be of value to anyone interested in ophthalmologic problems.

Melvin G. Alper, M.D.

**The Care of the Expectant Mother.** Josephine Barnes, M.A., D.M. (Oxon.), M.R.C.P. (London), F.R.C.S. (England), F.R.C.O.G., Assistant Obstetrician and Gynaecologist, Charing Cross Hospital and Elizabeth Garrett Anderson Hospital; Surgeon, Marie Curie Hospital. Price, $7.50. Pp. 270. New York: Philos. Libr., 1956.

This book constitutes an extremely brief and concise description of normal pregnancy, abnormal pregnancy and diseases complicating pregnancy. As the author states, it was written as a practical guide for those who undertake the management of pregnancy. It is a guide and nothing more. Perhaps in England, where most of the obstetrics is done by the midwife, it would have some very definite value. I have the feeling that it was actually written for them. Here, because of its simplicity and clarity and numerous good illustrations, it could be used to advantage by the obstetrical nurse and, perhaps, the student. As an obstetrical text for the American obstetrician, it would have no value, except for the limited insight into the practice of "Midwifery" in Great Britain as given in chapters 5 and 6. This is of interest because it is so totally different from our approach in the United States.

Emphasis is placed on prenatal care and training, but the English woman actually receives a minimal amount of prenatal care from a physician and an infinitesimal amount of personal attention. The British reluctance to alleviate the pain of labor is highlighted by the statement, "Analgesics will be available and will be given if required."

Chapter 6 is noteworthy in two respects: It shows how small a part the English physician plays in the care and delivery of the English obstetric patient; it depicts briefly, but in horrifying clarity, what socialization does to the practice of medicine. The author states that hospital beds are not available and hence a large percentage of deliveries occur in the home. Also, that "the existence of three separate authorities responsible for maternity services might be thought to lead to a certain amount of confusion and overlapping. On the whole the service is working reasonably well." And further, "It would appear important . . . that the G.P. . . . is not excluded from (the) family event. It often happens that a mother is attending an antenatal clinic without her doctor being aware that she is pregnant until he is called in for some emergency." These statements along with talk of forms EC.24—EC.24A—EC. 10, etc., should be enough to make the American obstetrician say, "It must not happen here." Though not intended, this is actually the most important information or message to be derived from this book.

Melchior F. R. Savarese, M.D.

**Fundamental Marriage Counseling—A Catholic Viewpoint.** John R. Cavanagh, M.D., Fellow of the American College of Physicians; Fellow of the American Psychiatric Association; Knight of St. Gregory; Diplomate of the American Board of Neurology and Psychiatry; special lecturer in the School of Sacred Theology, Catholic University of America; member of the Commission on Mental Health, District of Columbia; lecturer in mental health, Trinity College; former lecturer in psychiatry, National Catholic School of Social Service; former Commander, Medical Corps, United States Navy. Price, $8.00. Pp. 598. Milwaukee: Bruce, 1957.

Dr. Cavanagh has succeeded admirably in attaining the objective of his book in which he states, "We seek to provide the marriage counselor with information he will

(*Continued on page 32*)

## Book Reviews

(*Continued from page 31*)

need either for giving premarital instruction or aiding postmarital adjustments." His book is divided into 5 sections, dealing with biological aspects of marriage, sexual aspects of marriage, fertility and marriage, social aspects of marriage, and religious aspects of the marital relationships.

Dr. Cavanagh, in addition to his knowledge as an internist and psychiatrist, has called upon 9 other professional men, outstanding specialists in the fields of obstetrics and gynecology, sociology, theology, civil and church law, to contribute special chapters.

The book is an excellent source of facts which are readily accessible through a complete and workable index. In addition, it has a voluminous bibliography, which should be invaluable to students and researchers in this field. An adequate glossary of scientific terms is thoughtfully included for the lay reader.

On such controversial subjects as sterilization, mechanical contraception and therapeutic abortion, Dr. Cavanagh meets the problems head on and takes an unequivocal stand with the Roman Church. Although the reader is never left in doubt as to where he stands, Dr. Cavanagh always presents both sides of the problem. His refutation of the views of Planned Parenthood Federation of America seemed rather unnecessary and added little to the value of the chapter on conception control.

For the full time marriage counselor, this book will fill a long overdue need. For the physician-counselor, it will serve Roman Catholic and non-Catholic alike as a valuable reference. Obstetricians and gynecologists of all faiths should have this book available for its invaluable information on the Catholic Church's opinions on abortion, sterilization, contraception, rhythm, infertility studies and infant baptism.

Dr. Cavanagh is to be congratulated on his pioneering efforts in developing a book which should appeal to all specialists, not because it is complete for any one specialty but because it supplies adequate information on related subjects.

Jed W. Pearson, Jr., M.D.

**Current Therapy 1957—Latest Approved Methods of Treatment for the Practicing Physician.** Edited by Howard F. Conn, M.D. Consulting Editors: George E. Burch, M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, Perrin H. Long, Clarence S. Livingood, H. Houston Merritt, Walter L. Palmer, Hobart A. Reimann, Cyrus C. Sturgis, and Robert H. Williams. Price, $11.00. Pp. 731. Philadephia: Saunders, 1957.

This is the ninth edition of this valuable textbook, which was begun in 1949. It is remarkably up-to-date and contains information on the latest advances in the

(*Continued on page 33*)

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## Book Reviews

(*Continued from page 32*)

therapy of a great many diseases. The unique feature of this book is that there are 300 authors contributing original articles written specifically for this publication. Most of these contributors are well recognized experts in their various fields. The therapy of each disease is discussed fully by one of the authors, and often there are interesting comments concerning physical and laboratory diagnosis. In a few instances, where well known differences of opinion exist, 2 or more authors have discussed the same disease.

The volume is well organized and indexed. There are 16 different sections. All of the various subspecialties of internal medicine are considered in separate sections. In addition there are sections dealing with urology, dermatology, neurology, and obstetrics and gynecology. The last section contains valuable miscellaneous information including a roster of drugs and their composition, tables on making percentage solutions, and the important normal laboratory values.

As one would expect in a text of this nature, there is material which many will find controversial. However, because of the excellent selection of authors and editors the amount of controversial material is very small, considering the vast amount of information contained in this book. This is an excellent review of current therapy and is highly recommended to those interested in the treatment of medical disease.

ARTHUR BURGERMAN, M.D.

**Treatment of Heart Disease; a Clinical Physiologic Approach.** HARRY GROSS, M.D., F.A.C.P., Attending Physician, the Montefiore Hospital; Assistant Clinical Professor of Medicine, Columbia University College of Physicians and Surgeons, AND ABRAHAM JEZER, M.D., Attending Physician, the Montefiore Hospital; Assistant Clinical Professor of Medicine, Columbia University College of Physicians and Surgeons. Price $13.00. Pp. 549, with 91 illustrations. Philadelphia: Saunders, 1956.

The modalities for the treatment of heart disease have improved greatly in recent years, especially in the surgical field, where brilliant and ingenious technics often restore malformed and diseased hearts to normal function. Better understanding and utilization of physiologic principles in the treatment of the cardiac patient allow many of these individuals, once relegated to a wheelchair, to return to pleasant and gainful lives. This admirably organized and well written book goes into a thorough discussion of all the aspects of treatment and management of these patients.

The volume, which is very easy to read, is divided into 7 parts and an appendix. The parts are subdivided into chapters. Part I deals with the pathologic physiology of myocardial insufficiency, digitalis, quinidine, the

(*Continued on page 34*)

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## Book Reviews

(*Continued from page 33*)

arrhythmias, congestive heart failure, and the role of the diet in heart disease. Part II takes up hypertensive and arteriosclerotic heart disease. The management of hypertension, the newer antihypertensive agents, and the treatment of arteriosclerosis, aneurysms and infarcts are discussed. In Part III rheumatic fever, subacute bacterial endocarditis and other conditions secondary to inflammation are dealt with. The role of the antibiotics and the steroids is thoroughly discussed. Part IV contains an excellent summary of congenital heart disease and the surgical approach to the problem. Part V takes up the general aspects of surgery in heart disease and also the management of the pregnant heart patient. Anesthesia is discussed. Part VI deals with the cardiovascular effects of hyperthyroidism, myxedema and beriberi and the treatment. Part VII includes emotions, adjustments and rehabilitation in heart disease. The appendix contains diets, menus, low sodium foods, etc.

The authors state that it is their intention to reach the general man and imbue him with the physiologic approach to treatment. Internists and cardiologists also can read the book with profit.

T. Tayloe Perry, M.D.

**Pediatric Cardiology.** Alexander S. Nadas, M.D. F.A.A.P., Assistant Clinical Professor of Pediatrics, Harvard Medical School; Cardiologist, The Children's Hospital; Physician, Sharon Cardiovascular Unit, Children's Medical Center, Boston. Price, $12.00. Pp. 587, with 343 illustrations. Philadelphia: Saunders, 1957.

In reading almost every section of Nadas' new volume on pediatric cardiology, one has the impression that he is sitting at the side of the professor in reviewing matters concerning the clinical recognition and management of heart diesase in children. Perhaps this is because Dr. Nadas, as stated in his introduction, is writing almost exclusively about his own experiences at the Children's Medical Center. In so doing he is very direct and frequently employs the first person. He does this, however, as does the true teacher, with complete objectivity. For example, in discussing myocardial disease in patients who recover, he introduces his statement that idiopathic myocarditis rather than subendocardial sclerosis is the etiology by explaining that this is his "personal and fully unsubstantiated view."

Perhaps the thesis of the entire book is stated in the introduction to Chapter III, "Electrocardiography, accurate physical examination and radiology form the tripod on which rests the clinical diagnosis in pediatric cardiology. Omission of, unfamiliarity with, or misinterpretation of any of these tools spells disaster." In this book he expands on these tools and their use in the following sections: (1) The tools of diagnosis including physical diagnosis, radiology, electrocardiography, phonocardiography, cardiac catheterization, and angiocardiography, (2) Acquired heart disease, (3) Congenital heart disease, and (4) Anesthesia for children with heart disease. In this 587-page book, about half the pages are concerned with congenital heart disease—a manifestation of the current emphasis in pediatric cardiology.

Throughout, Nadas' style is clear and practical. At the introduction to most sections he states his purpose clearly, and in the section achieves that purpose. His description and highly illustrative diagrams of the physiological findings on cardiac catheterizations illuminate, even for the noncardiologist, the most confusing of the newer aspects of pediatric cardiology. This section is not highly detailed but covers adequately and completely for the "outsider" the physiology of and the meaning of cardiac catheterization, and these principles are applied in discussion of each congenital heart lesion. The objectivity and practicality of Dr. Nadas' observations are exemplified, for example, in discussing the indications and risks of cardiac catheterization: "There is no unanimity of opinion regarding indications for cardiac catheterization. A great deal depends on the experience and temperament of the physician making the decision." "The risk quoted parents in our department is that about 299 out of 300 of these procedures go perfectly well." In regard to angiocardiography as a diagnostic tool, Dr. Nadas states that "at the present time angiocardiography is used in only about 5 per cent of the patients with congenital heart disease admitted to the hospital for diagnostic purposes—the dangers of angiocardiography . . . are possibly 1 in 300 to 400 in cyanotic children, and 1 to 1,500 in non-cyanotic patients." Concerning the chemoprophylaxis of rheumatic fever recurrences this same objectivity and practicality are evident: "If the figures of Bland and Jones . . . are valid, there seems to be no good reason to administer chemoprophylaxis longer than 10 years after the first attack. Nevertheless, even if no more than 8 per cent of the patients have recurrences after 10 years, is it not worth preventing those? All that one may say is that every physician must make an individual decision in regard to each patient. There is a psychological point in the life of many patients at which getting rid of pills may be worth risking something in terms of rheumatic fever. Others do not mind taking medication *ad infinitum*. As far as pediatricians are concerned, anybody who has had acute rheumatic fever should be protected against streptococcal infections throughout childhood, probably for at least 10 years."

It is difficult for a non-cardiologist properly to evaluate the technical aspects presented in Nadas' book, but from conversations with some, the consensus is that these are entirely accurate and well presented. For the pediatrician, this is a very clear and easily read volume on the problems he may face directly or have to understand in referring a little one who has potential heart disease.

Robert H. Parrott, M.D.

MEDICAL ANNALS
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VOLUME XXVI | *August*, 1957 | NUMBER 8

# THE MANAGEMENT OF ACUTE GLOMERULONEPHRITIS*

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*Assistant Chief, Medical Service, Mount Alto Veterans Administration Hospital; Clinical Instructor in Medicine, George Washington University School of Medicine*

ACUTE glomerulonephritis, although not a common disease, is nevertheless an important disease of the kidney, and because of the lack of specific therapy requires considerable care on the part of the physician to avoid a fatal outcome and to attempt to avoid the development of chronic nephritis.

Glomerulonephritis is the least common of the 3 important diseases of the kidney, nephrosclerosis, pyelonephritis and glomerulonephritis. Its incidence among an adult male population is about 3 per cent. This, however, represented about 8 per cent of patients with renal disease, significant enough to attract attention (table 1).

When glomerulonephritis occurs it may present in several forms. Based on both pathologic and clinical characteristics, the 3 most striking are acute hemorrhagic glomerulonephritis, acute hemorrhagic glomerulonephritis with tubular necrosis, and acute membranous glomerulonephritis.

Acute hemorrhagic glomerulonephritis histologically shows proliferation of the endothelial cells of the glomerular tufts (figure 1), encroachment on the vascular channels of the glomerulus, and infiltration of the glomerulus by inflammatory cells. There may be adhesions between the glomerulus and Bowman's capsule or thicken-

TABLE 1
*Pathology of Acute Glomerulonephritis**
(5-year Summary)

| | No. | Per cent |
|---|---|---|
| Patients admitted to Medical Service | 7,614 | |
| Acute hemorrhagic glomerulonephritis | 16 | |
| Acute hemorrhagic glomerulonephritis with tubular necrosis | 2 | |
| Acute membranous glomerulonephritis | 5 | |
| Total | 23 | 0.3 |
| Total biopsies (renal disease) | 283 | 8.2 |

* These figures were taken from the records of the Mt. Alto Veterans Administration Hospital, Washington, D. C.

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* Presented at the Sixth Midwinter Seminar of The Medical Society of the District of Columbia in Washington, D. C., February 20, 1957.

ing of the glomerular basement membrane (figures 1 and 2).

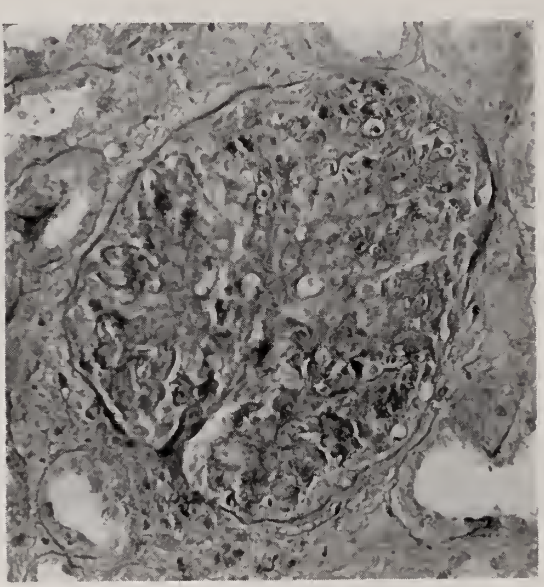

Fig. 1. Acute hemorrhagic glomerulonephritis.

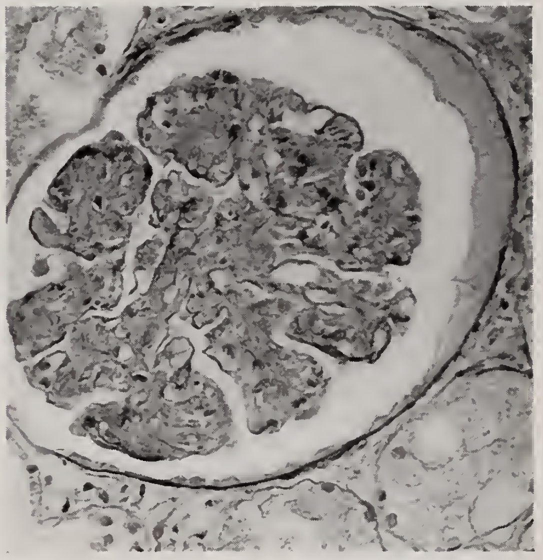

Fig. 2. Acute hemorrhagic glomerulonephritis with tubular necrosis.

Acute glomerulonephritis with tubular necrosis (figure 2) shows, in addition to the preceding findings, early and marked tubular disease with vacuolization of the tubular epithelium and pyknosis of the nuclei, and later sloughing and replacement of the tubular epithelium by squamous epithelium.[1, 2]

Acute membranous glomerulonephritis is characterized by thickening of the glomerular basement membrane with little or none of the preceding findings (figure 3).

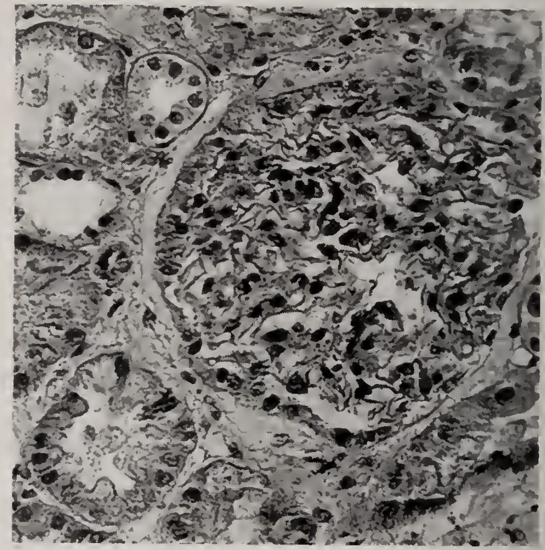

Fig. 3. Acute membranous glomerulonephritis.

The clinical differentiation between these 3 forms is shown in table 2. Acute hemorrhagic glomerulonephritis is seen most commonly. The patients have a history of an infection, usually in the upper respiratory tract and usually due to a type 12 or type 4 hemolytic streptococcus. After an interval of 1 to 2 weeks following their infection there is a fairly rapid onset of facial edema, ankle edema, decreased urine output, and constitutional symptoms of nausea, anorexia and vomiting. Examination shows, in addition, hypertension, usually of mild degree, retinal edema, and azotemia. Signs of heart failure may be present. The urine typically has a high specific gravity and contains protein, red blood cells, and red blood cell casts. The presence of red blood cell casts makes the diagnosis. The patient may present as a "lower nephron syndrome" with anuria, but if he shows other signs suggestive of acute nephritis, and if he has a history

TABLE 2

*Differential Diagnosis of Acute Glomerulonephritis*

| | Acute Hemorrhagic Glomerulonephritis | Acute Hemorrhagic Glomerulonephritis with Tubular Necrosis | Acute Membranous Glomerulonephritis |
|---|---|---|---|
| Onset | Sudden | Sudden | Gradual |
| Previous infection | Yes | Yes | ? |
| Clinical picture | Edema, hypertension, oliguria, azotemia, smoky urine | Same but with anuria | Anasarca, normal blood pressure, no azotemia |
| Urine | RBC, RBC casts | Same | Massive proteinuria, fatty casts, and fat-laden cells |
| Specific diagnosis | RBC casts | RBC casts | Renal biopsy |

of upper respiratory infection, and particularly if he shows red blood cell casts in his urine, the diagnosis of acute glomerulonephritis with tubular necrosis can be made. Again the presence of red blood cell casts in the urinary sediment makes the diagnosis. On the other hand, the patient with acute membranous glomerulonephritis presents with generalized anasarca, massive proteinuria, fat in the cells or casts of the urinary sediment as demonstrated by Sudan staining or polarized light, and elevated blood cholesterol, with or without azotemia, and with or without hypertension. This can be differentiated from other forms of nephrosis only by renal biopsy.

## ACUTE HEMORRHAGIC GLOMERULONEPHRITIS

A typical hospital course of a patient with acute hemorrhagic glomerulonephritis is seen in figure 4.

This was a 31-year-old truck driver who was admitted with the history of facial edema, malaise, and generalized weakness of one week's duration. He had had a sore throat a week preceding the onset of edema. At the time of entrance into the hospital he had anorexia, nausea and vomiting. He complained of right flank pain and decreased urine output. Examination showed a blood pressure of 150/80, pulse rate of 72, and temperature of 98.4°F. There were facial edema, left subconjunctival hemorrhage, petechiae over the hard palate, abdominal tenderness, especially on the right, and costovertebral angle tenderness. There was no pharyngitis and no ankle edema. Initial laboratory tests revealed a hematocrit of 36 per cent, sedimentation rate of 30 mm. per hour, a normal white blood cell count, and a normal differential count. The blood urea nitrogen was 114 mg. per 100 ml. of blood, total protein of 6.0 Gm., with 3.5 Gm. of albumin and 2.5 Gm. of globulin. Phenolsulfonphthalein execretion was 0 per cent in 15 minutes, and the urea clearance was 53 per cent of maximum clearance. Urinalysis

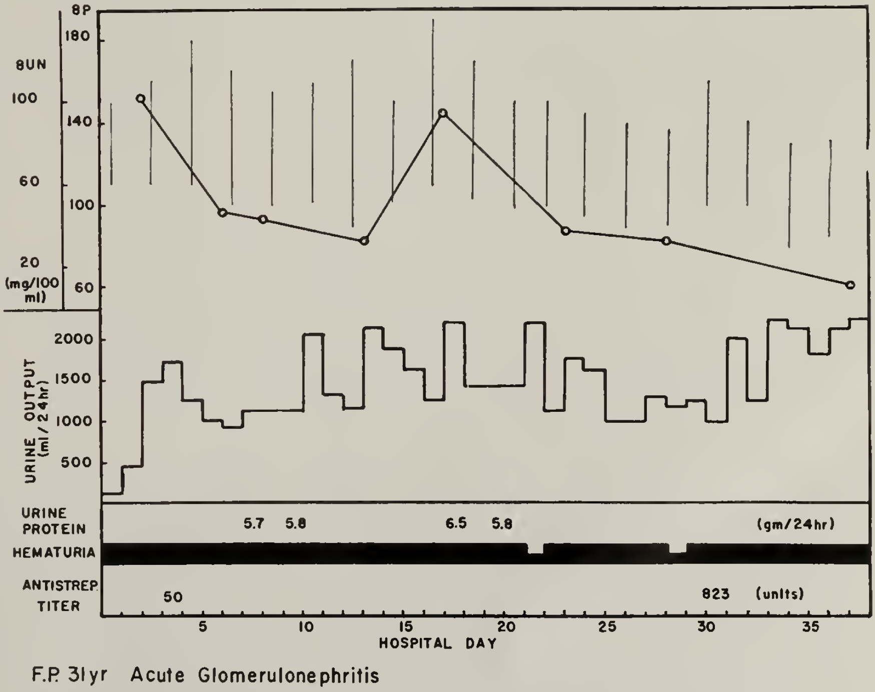

FIG. 4. Hospital course in patient F. P. (acute hemorrhagic glomerulonephritis).

showed innumerable red blood cells, many red blood cell casts, and 4 to 5 Gm. of protein per 24 hours. During his hospitalization he improved slowly on a low protein (40 Gm.) diet. His hematuria persisted throughout his hospitalization and continued for 3 months after discharge (a total of 5 months). The antistreptolysin titer rose from less than 50 units to 823 units. His serum potassium initially was 6.3 mEq. per liter and fell to normal after 2 weeks.

After discharge from the hospital the patient continued to complain of malaise for approximately 6 months, and he was not able to return to full-time work until after this. The low protein diet was continued for 1 year, and he was then allowed an unrestricted diet. Three years after his illness he is asymptomatic and has a normal urine and normal renal functions.

Most of these patients do well without a great deal of concern. Anywhere from 21 to 55 per cent of adults and up to 95 per cent of children recover.[3-6]

It is advisable to place such patients on bed rest until the blood pressure has returned to normal or stabilized, until the blood urea nitrogen has returned to normal, and until edema has gone. Patients should be placed on a low protein diet of 40 Gm. or less during the time of the acute illness. Antibiotics should be used for intercurrent infection, and particularly if the patient still shows pharyngitis or evidence of the initial infection which may have precipitated the renal lesion. Diuretics are contraindicated, and a low-sodium diet is usually not necessary.

Some patients may develop edema, which becomes a problem. This is usually associated with congestive heart failure. If it occurs, a low-sodium diet should be added to the low-protein diet and digitalis given if signs of congestive heart failure develop. If the edema progresses in spite of a low-sodium diet and digitalis, water restriction to 1,500 ml. daily or less is indicated, but again diuretics are contraindicated.

Occasional patients develop marked elevation of their blood pressure and hypertensive encephalopathy. Time-honored treatment has been magnesium sulfate, 0.2 ml. of a 50 per cent solution per kg. body weight intramuscularly to control convulsions. However, newer preparations of Veratrum or reserpine are of greater benefit.[7] Usually therapy may be started with reserpine 2 mg. intramuscularly, repeated in 4 hours with 4 mg. intramuscularly. If no response occurs to this, Veratrum may be added intramuscularly at about half of the effective dose, followed by three-fourths of the effective dose in 1 hour, followed again in 1 hour by the full dose, and so on until a response is obtained. If hypertensive encephalopathy is acute and drastic measures must be taken, a blocking agent such as Arfonad or Bistrium may be given slowly intravenously and the blood pressure dropped to lower levels. This, however, is not recommended therapy.

Hyperkalemia may develop. This may be controlled by reducing the intake of potassium by eliminating foods such as fruit juices, broths and other things that contain large amounts of potassium, and by the administration of exchange resins which adsorb the potassium ion, such as the sodium salt of carboxylic acid resin or SKF 648 Resin. In most patients, anorexia, nausea and vomiting are a problem. These may be controlled with anti-emetic drugs such as Sparine, Thorazine or Compazine.

## ACUTE HEMORRHAGIC GLOMERULONEPHRITIS WITH TUBULAR NECROSIS

Acute hemorrhagic glomerulonephritis with tubular necrosis usually is a diagnostic problem as well as a therapeutic one. It is necessary to make certain that the history does not reveal exposure to toxic materials, and it may be necessary to obtain a renal biopsy to make a definitive diagnosis. A typical case is the following (figure 5):

A 32-year-old male postal clerk came to the hospital with the history of a sore throat, fever, and anorexia beginning 10 days earlier and suddenly becoming worse 2 days before admission. At this time he also developed vomiting, suprapubic pain, frontal headache, facial edema, swelling of his hands, and a marked decrease in urine output with a change in his urine to a dark brown color. There was no history of exposure to toxic materials. Examination revealed an acutely ill man with a blood pressure of 126/80, pulse rate of 72, and temperature of 100°F. There was facial, leg and hand edema. The pharynx was slightly injected. There was moderate suprapubic tenderness. Initial laboratory tests showed a hematocrit of 37 per cent, sedimentation rate of 31 mm. per hour, and a normal white blood cell and differential count. The urine contained many red blood cells, red blood cell casts, epithelial cells, and 4+ protein. A nonprotein nitrogen was 72 mg. per 100 ml., total protein 6.3 Gm. per 100 ml., with 4.0 Gm. of albumin and 2.3 Gm. of globulin, and a creatinine of 5.0 mg. per 100 ml. A throat culture grew alpha streptococci.

He was placed on a low-protein, low-sodium diet with fluid limited to 800 ml. per day until the seventh day, when the urine increased to 900 ml. per day and remained good thereafter. A renal biopsy specimen obtained on the third hospital day revealed the changes of acute glomerulonephritis with marked tubular damage (figure 2). The patient improved steadily and now 2 years later is asymptomatic, with normal renal function.

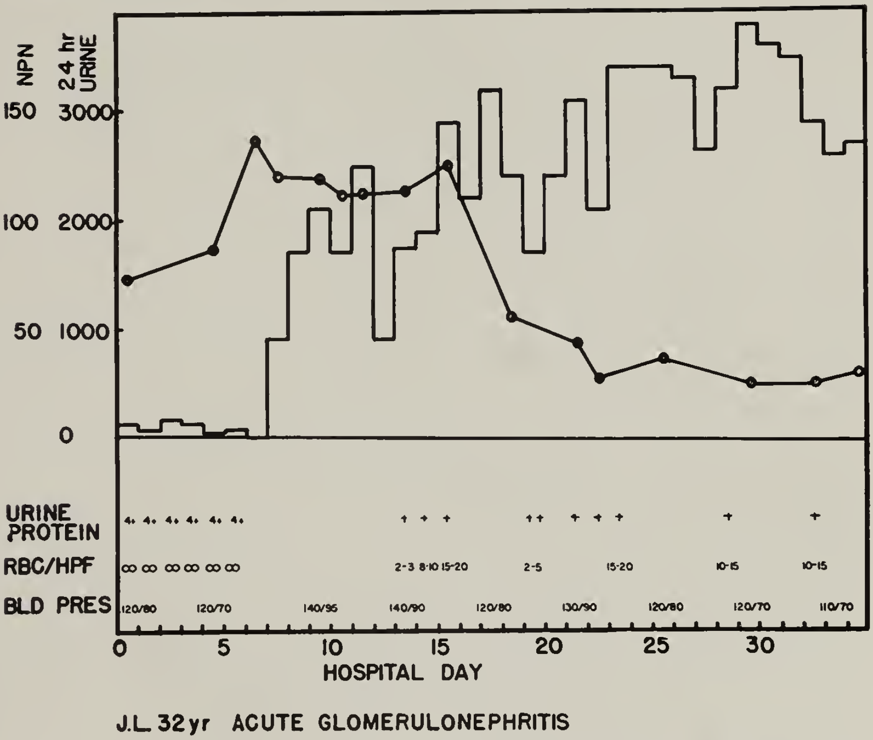

FIG. 5. Hospital course in patient J. L. (acute hemorrhagic glomerulonephritis with tubular necrosis).

These patients should be treated as if they had acute tubular necrosis due to a toxic agent ("lower nephron syndrome") and fluid intake restricted to 800 ml. per day, plus water loss in urine, vomitus and stool (less in children).

Correction of serum electrolytes is often necessary, particularly if there has been much vomiting. Initially fluids may have to be given to reëstablish hydration. If clinical dehydration is present, up to 4 per cent of body weight as glucose in water may be given intravenously.

Protein intake should be restricted drastically, and preferably a no-protein diet should be given, either as a Borst soup (salt-free butter 150 Gm., sugar 150 Gm., and coffee) or some of the oil-glucose supplements, such as Lipomul or Ediol, which contain about 120 calories per ounce.

Often the serum potassium is high. This may be lowered temporarily by giving glucose and insulin intravenously (50 Gm. glucose and 25 units of regular insulin); or potassium-adsorbing resins may be given orally (sodium salt of carboxylic acid resin, Lilly, 1 ounce orally every 4 to 6 hours). Since these resins may produce constipation, a mild cathartic may be necessary given along with it (cascara or mineral oil). The use of antiemetic drugs such as Sparine or Thorazine, 10 to 25 mg. intramuscularly every 4 to 6 hours, is almost invariably necessary to control nausea and vomiting. If the patient's condition becomes worse or if the serum potassium continues to rise in spite of adequate conservative therapy, it may be necessary to use artificial dialysis.

As with other causes for acute tubular necrosis, when the anuric phase is over there may be excessive loss of water and electrolytes. Careful observation must continue until the patient is well beyond his anuric phase.

## ACUTE MEMBRANOUS GLOMERULONEPHRITIS

Acute membranous glomerulonephritis clinically presents as the nephrotic syndrome with anasarca, hypoproteinemia, proteinuria, and hypocholesterolemia and cannot be well differentiated on clinical grounds alone from other cases of the nephrotic syndrome, although there are several things which suggest that acute membranous glomerulonephritis may be the diagnosis. These are (1) lack of a history of renal disease, (2) lack of hypertension, (3) lack of, or minimal azotemia, and (4) presence of relatively good renal function. None of these is diagnostic. The definitive diagnosis can only be made by the pathologist by means of a renal biopsy. A typical case is illustrated in figure 6.

A 34-year-old white male aircraft machinist was well until 6 to 7 weeks before admission, when he noted anorexia, weakness, and easy fatigability. Five days before admission he developed nausea, vomiting, diarrhea and ankle edema. His edema increased to the time of admission. He had no history of renal disease or scarlet fever. His son had been treated for acute glomerulonephritis 3 months previously. Examination was normal except for ascites and pitting edema of the legs and sacrum. The blood pressure was 138/80, pulse rate 88, and temperature 98.6°F.

The initial laboratory tests showed a normal blood cell count, blood urea nitrogen of 29 mg., serum creatinine of 0.9 mg., total protein of 3.6 Gm., and cholesterol of 540 mg. per 100 ml., with serum potassium of 6.0 mEq. and serum sodium of 130 mEq. per liter. The urine contained 4+ protein with many hyaline and granular casts and epithelial cells. Fat and double refractile bodies stained with Sudan 3 were present.

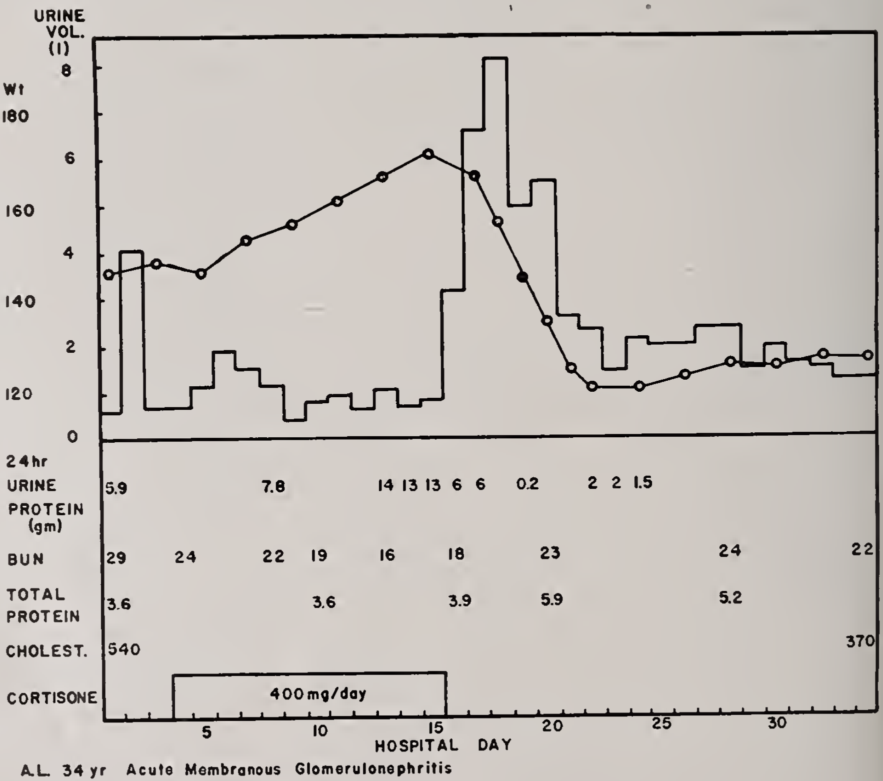

FIG. 6. Hospital course in patient A. L. (acute membranous glomerulonephritis).

A renal biopsy revealed diffuse thickening of the basement membrane, a slight increase in cellularity of the glomeruli, and coarse vacuolization of the tubular epithelium (figure 3). This was compatible with the diagnosis of membranous glomerulonephritis.

The patient was placed on cortisone, 400 mg. per day for 10 days. During this period he showed no improvement and there was a weight gain of 26 lbs. When cortisone was stopped there was a prompt diuresis with the urine volume reaching 800 ml. per 24 hours and a weight loss of 51 lbs. The urine protein fell from 5.9 Gm. per 24 hours to 1.5 Gm. per 24 hours, and there was a rise in the serum protein to 5.6 Gm. per 100 ml.

After 38 days' hospitalization the patient was discharged, asymptomatic, free of edema, and with only a trace of protein in his urine.

With or without a definitive diagnosis these patients present a difficult therapeutic problem. Some respond to the use of steroids or ACTH; some require salt-free albumin intravenously; others seem to progress or recover regardless of therapy. Steroids may be given for a short period (cortisone, 400 mg. per day for 10 days) or over a prolonged period (cortisone, 200 to 400 mg.

per day). ACTH may be given over a similar 10-day period (25 mg. per 6 hours). Frequently diuresis and improvement occur when the drug is stopped. Occasionally recovery occurs slowly under prolonged therapy, so that, if improvement does not take place after 10 days and providing the edema has not worsened, the drug may be continued longer.

If after 3 to 4 weeks no improvement has taken place or if edema progresses under steroid or ACTH therapy, salt-free albumin may be given intravenously, approximately 50 Gm. per day to an adult, 25 Gm. per day to a 3- to 4-year-old child, until edema is controlled, and then every other day or less frequently, until none is required to control edema. This is usually accompanied by diuresis and loss of edema. Proteinuria increases, and most of the albumin is excreted in the urine. The serum protein may rise after several weeks, but the patient's loss of edema and diuresis usually occurs within 4 to 7 days. If no response occurs within this period, albumin may be discontinued for the time being and a second trial made later.

Other agents, such as gum acacia, urea, thyroid and nitrogen mustard, are, in general, less effective.

Sodium restriction (200 mg. sodium diet) is usually necessary, particularly if steroids or ACTH are used. Secondary infection is common, especially in children. In adults, pyelonephritis appears to be a frequent complication. It is necessary, therefore, to watch for intercurrent infections and to treat them as they develop.

Patients with membranous glomerulonephritis have a better prognosis than patients with other causes for the nephrotic syndrome. These appear to be the patients who respond best to therapy, especially to the steroids or ACTH. Since these drugs are contraindicated in some types of nephrosis (e.g., that accompanying lupus erythematosus) a renal biopsy is indicated in every patient with the nephrotic syndrome before definitive therapy is undertaken.

## SUMMARY

Acute glomerulonephritis may present in at least 3 forms: acute hemorrhagic glomerulonephritis, acute renal insufficiency ("lower nephron syndrome"), or nephrosis. Each form requires a different approach with therapy, and treatment is based on careful differentiation of the underlying disease.

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# THE BALLISTOCARDIOGRAPH IN LUMINAL AORTIC OBSTRUCTIONS

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THE DYNAMIC surgical advances of the past few years have made accurate diagnosis of aortic obstructive lesions of extreme importance. The diagnosis of aortic coarctation is usually not difficult but may be troublesome in the absence of hypertension or in atypical cases.

The diagnosis of insidious thrombosis and atheromatous obstruction of the terminal aorta frequently presents difficult and confusing symptoms and is often missed until late in the disease process.

This paper is primarily concerned with studies using both high and ultra low frequency ballistocardiograms as an aid in diagnosis for both coarctation and the Leriche-type syndrome. The clinical material studied was 11 cases of aortic coarctation and 2 cases of lower aortic obstruction.

## High Frequency Ballistocardiograms

The system used for this study involves the technic of measurement directly from the tibia, in which the natural frequency of the leg-piece was maintained at 25 cycles or higher. Our studies for proper measurement of direct body motion have previously been published[1] with normal standards.[2]

There has been no literature published with the use of the direct body system on diseases of the aorta, although Brown[3] published a study of 6 cases of coarctation with the use of a high frequency ballistic table. He found that all 6 cases of coarctation showed the characteristic ballistocardiographic abnormality of a shortened JK stroke and demonstrated the usefulness of the ballistocardiograph as a diagnostic agent in suspected cases of aortic coarctation.

Hamilton[4] in 1945 made the first reference to the ballistocardiograph in coarctation, and reported a case in which the short JK downstroke was mentioned.

There were 11 cases of coarctation studied in this series. In 9 of these coarctation was the only cardiovascular lesion. Two patients had aortic insufficiency with probable bicuspid valves as well as coarctation. The age distribution was 17 to 51 years of age. One patient, a 34-year-old woman, had previously been operated upon for essential hypertension (sympathectomy) in another city. Five of the 11 patients were operated upon and the diagnosis confirmed. The other 6 had confirmation by angiocardiography, and in 1 case catheterization through the femoral artery established a gradient when the angiocardiogram was difficult to interpret. It is interesting to note that 2 patients were normotensive and 1 case had a blood pressure of 146/92.

The 13 patients with luminal aortic obstruction studied for this report all showed evidence of the diagnostic short, blunted displacement of the K wave.

### ULTRA LOW FREQUENCY BALLISTOCARDIOGRAPHY

While the present studies were in progress a new system of measurement became available. The ultra low frequency systems maintain a natural frequency of ⅓ of a cycle or lower and thus are linear to motion in the frequency range of ballistic motions. This system is comparable to measuring motion as if the body were freely suspended in space with little or no distortion produced by the restoring force of the dorsal body spring as is present in the high frequency systems. These factors of linearity may make quantitation of aortic flow changes more precise.

Nickerson[5] described changes in coarctation of the aorta, using a low frequency, critically damped bed, and Murphy,[6] using the same system, showed consistently abnormal tracings in coarctation and also in 10 patients with thrombosis of the terminal aorta. These systems, however, like the high-frequency system, suffer from appreciable distortion, making quantitative measurement extremely hazardous. In general, the displacement curves in the Nickerson bed tend to resemble the velocity curves of the ultra low-frequency systems, due to inherent phase distortion of the critically damped bed of the Nickerson type.

The ultra low-frequency system used in this study was a pendulous bed as developed by Rappaport.[7] The natural frequency of the bed was ⅓ of a cycle, and damping was maintained at 0.25 of critical. The bed weight was 5 lbs., and a bar magnet was coupled rigidly to the bed. The transducer system[8] was a calibrated instrument capable of measuring the displacement, velocity and acceleration components of motion simultaneously on a Sanborn 4-channel poly-viso recorder. This system has a frequency response that is flat to 20 cycles.

The displacement curve in this system normally reaches its maximum height at the M peak. The aortic valve closes at this point and the center of gravity of the system shifts foot-

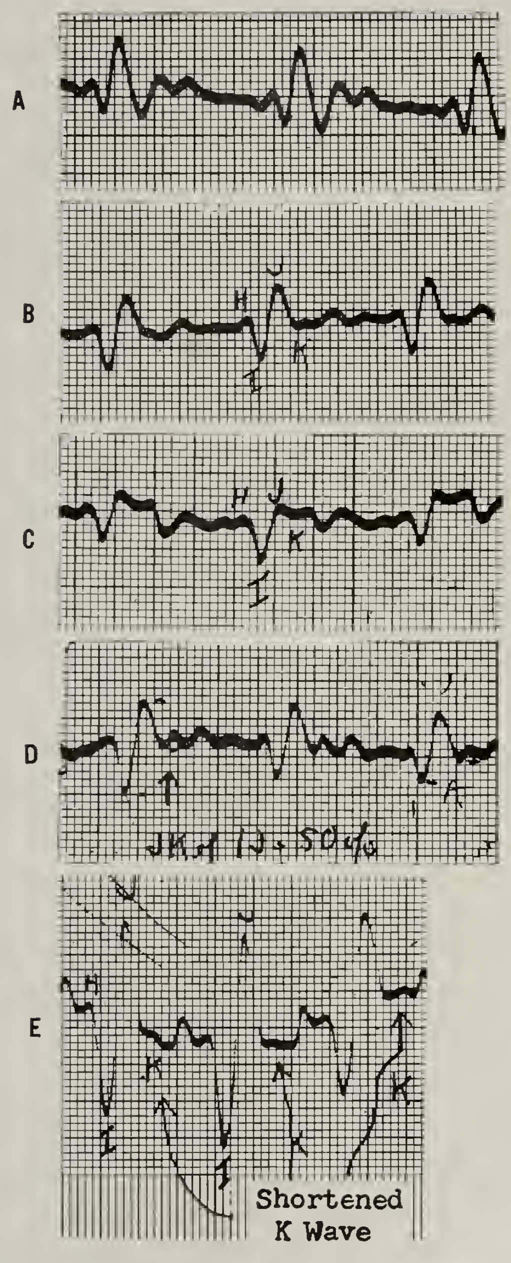

FIG. 1. This illustrates a normal displacement ballistocardiogram from a high frequency system and 4 cases of coarctation.

A. 39-year-old man—normal.
B. 39-year-old man, B.P. 146/92—coarctation.
C. 44-year-old woman, B.P. 210/110.
D. 17-year-old woman, B.P. 180/100.
E. 26-year-old man, with aortic insufficiency and coarctation, B.P. 200/36.

Note the short, blunted K wave in all cases of coarctation.

ward and returns to the baseline. The normal displacement curve looks like an inverted letter "V".

In obstructions of aortic flow the displacement IJ becomes large (normally small and not in excess of 5 mm.), and at the M peak the center of gravity continues slowly headward instead of returning to a baseline as in normals.

The velocity curves on obstructions show a large HI complex with the J peak showing no footward deflection. The velocity IJ is slurred and blunted and shows no return to the baseline as is found in normals.

The acceleration curves from the ultra low frequency system have shown notching at the J peak and slurred K waves with shortening. The notching at the acceleration J peak shows identical timing with a notch present on the peak of ejection of the carotid pulse. These changes have been present in most obstructive lesions to date. This abnormally directed headward force had been noted previously by Deuchar[9] in a combined system study illustrating a case of coarctation but using only acceleration measurement with an aperiodic system.

The cause of this abnormally directed headward force is unknown. It is probably related to changes in the aortic compression chamber and alteration of the standing waves. This could result from a small segment of

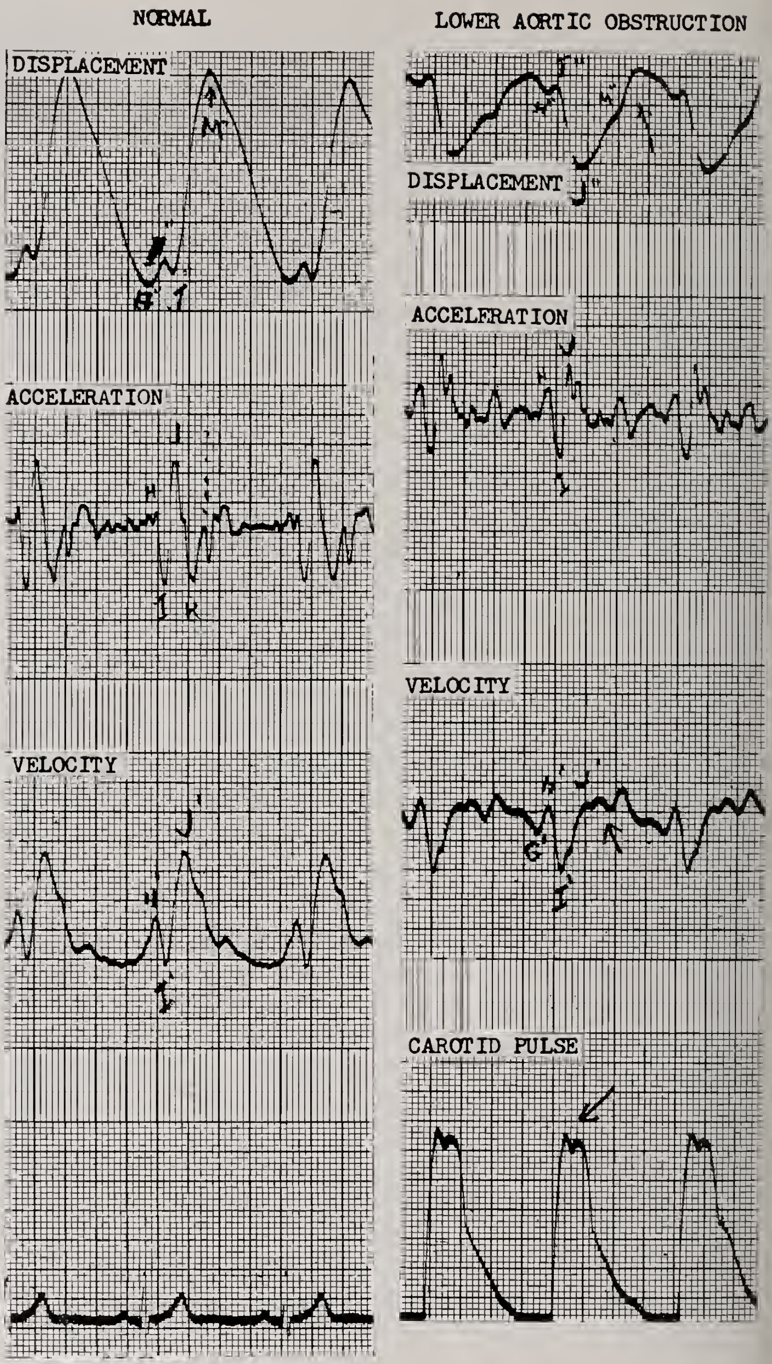

FIG. 2. Ultra low frequency ballistocardiograms from a normal subject and a 35-year-old man with obstruction of the terminal aorta. Note the normal small IJ displacement in comparison with large IJ in obstruction. Also, compare the normal M peak and the rapid shift back to the baseline with M peak in obstruction which continues headward.

aorta with abnormally high pressure with a headward reflected wave projected when intraventricular pressures drop below aortic pressure during the period of reduced ejection.

In general, the displacement and velocity curves have shown evidence of aortic flow abnormality more clearly than can be detected on the acceleration curves. This has been true in both high and low frequency systems. The most dramatic, and probably the most valuable, measurement has been a displacement measurement with an ultra low frequency system being used.

It should be noted that adequate clinical examination can detect aortic obstructions without the ballistocardiograph, especially in the coarctation group. As in any system of medical study, there is no substitute for a good doctor. The ballistocardiograph should be of value in atypical cases of coarctation and other aortic obstructions.

In figure 1 the displacement curves of a normal subject and 4 cases of coarctation are illustrated, showing the short JK segment and the blunted K wave as found in using a high frequency system.

In figure 2 the changes from normal are shown with the ultra low frequency system being used. The tracing on the right was from a 35-year-old man with surgically proven obstruction of the terminal aorta of the Leriche type.

## Summary and Conclusions

The ballistocardiograph has shown abnormal patterns in 11 cases of aortic coarctation and 2 cases of lower abdominal obstruction.

The high frequency ballistocardiograph shows a short, blunted displacement K wave in cases of luminal obstruction.

The ultra low frequency displacement and velocity ballistocardiograph show a more distinctive pattern and greater deviation from normal in the cases studied than can be obtained from the high frequency systems.

The ultra low frequency system should be a valuable tool in studies of aortic blood flow.

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# A BRIEF HISTORY OF ELECTRICITY AND ELECTROTHERAPEUTICS

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ELECTRICITY in the treatment of disease has been employed for ages. First knowledge of it embraced a period of wonderment, which goes back to ancient history, followed by a period of experimental research and development, and finally, within recent years, a period of refinement of technics.

In the early eras of history, when facts were confused with myth, legend, and superstition, centuries passed before philosophers, some of whom were physicians and early scientists, directed attention toward observation of the strange phenomena of amber. Thales of Miletus was one whose "profound knowledge of science and metaphysics" inspired the Phoenician voyagers to sail beyond the Mediterranean Sea to the Baltic Sea to gather a mysterious substance from its waters, which he named electron or amber,[1] hence our word, electricity. His interest in the study of its peculiar phenomena led to the knowledge that it attracted to itself, when rubbed, a number of light objects.

Tacitus[2] (54–117 A.D.), who ranks foremost among ancient historians for accuracy and fairness of judgment, describes ancient Germanic tribes on the shores of the North Sea who "search the deep, and of all the rest are the only people who gather amber; they call it glasing, and find it among the shallows and the very shore. But because of the ordinary incuriosity and ignorance of the Barbarians, they have neither learned, nor do they enquire, of its nature, or for what cause it is produced. In truth it lay long neglected among the other gross discharges of the sea, until from our luxury, it gained a name and value."

Throughout the ages it confounded the philosophers and historians, among whom are recorded the writing of Theophrastus, who conferred upon it the name of "animated gem" and Pliny, who followed with learned dissertations upon the substance. None of these philosophers, historians, or early scientists had the slightest conception that electron and the thunderbolt, which silenced the orators of Greece and Rome into fear and veneration, were identical. That was left to a far later period, recorded in a brilliant chapter of American history.

The world was 2,500 years in finding the first useful occupation for the spark that Thales discovered in amber, and, when it was found it was in the practice of medicine.[3]

In 1590 Gilbert, a physician to Queen Elizabeth and later to James I, rekindled the flame of earlier writers on electron or amber, which through the years smoldered in the recorded writings of scientists, physicians, philosophers or historians. To the physician Gilbert is given the credit for placing electron in the realm of science, although he did not attempt to use it for medical purposes. In his "De Magnete" it was currently reported: "The supernatural seemed to envelope its pages. The printed words breathed of the spiritual sparks and flames; shocks and strange sensations, pranced and teased the hands and bodies of hundreds of experimenters, and the masses of the people were almost unanimous in declaring that electron was invested with a soul."[4] So important are the experiments and works of Gilbert that the birth of the science of electricity is attributed to him. Probably stimulated by the work of Gilbert, Otto von Guericke, a German of Magdenburg, invented the first "electrical machine" by placing a ball of sulfur on a revolving axle, thereby causing a spark discharge through rotation and friction. Up to this time there was no known method for conveying or conducting electricity, and the need for this led to an important discovery of Stephen Grey in 1729; he showed that when produced, it could be conveyed, which he did for 666 feet.

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Shortly after this the whole of Europe was awestruck by the invention of the Leyden jar. Professor Musschenbroek received its first full discharge, and he wrote to Reaumur that he would not suffer a second such shock for the whole kingdom of France.[4]

Medical electricity had its beginning in the discovery of the Leyden jar by Cuneus in 1745. It was a device for condensing and discharging electricity, an important landmark in scientific electrical literature. Following the discovery of the Leyden jar, Benjamin Franklin, utilizing the principle, invented a battery of jars capable of giving shocks and flashes said to be comparable to the thunderbolt. He conceived the idea that electricity of the elements and the earth were one, but for his contention he was ridiculed by the Royal Society of England. His experiment with a kite on a rainy day in June 1752 in Philadelphia is known to every schoolboy, and because of its epoch-making significance the Royal Society recanted and awarded him its greatest prize. After he had harnessed the electricity of the storm and conducted it to the ground he proved the unity of all static electricity, which was the only form known at that time.

Up to this time scientific discovery had demonstrated that (1) electricity could be produced by a machine, (2) conducted wherever needed, and (3) condensed and stored in a Leyden jar for medical usage whenever needed.

The time was now ripe for its application to the treatment of disease. Space does not permit of an extensive review of the literature upon results obtained by the early electrical devices in the treatment of disease. It is rather intended to show that investigators, scientists and practicing physicians were intrigued, and they seized a golden opportunity to apply the new discoveries to medicine as physicians and scientists are doing with the atom today. Among those recorded, a few will suffice, of whom De Haen (1745), Jallabert (1748), and Abbie Nollet (1749) were the first to use electricity for medical purposes. This was more than 100 years after Gilbert's time. In 1758 Benjamin Franklin tried electric current upon a number of paralytics. Monell[5] and Kassabian dwell at some length upon the experience of John Wesley, the Father of the Methodist Church, who is described as not only "one of the greatest preachers of all time, but an uncommonly clever amateur physician." In 1756 Wesley published the "Desideratum, or Electricity Made Plain and Useful, by a Lover of Mankind and Common Sense." Wesley[6] writes: "Having procured an apparatus on purpose, I ordered several persons to be electrified, who were ill of various disorders; some of whom found an immediate, some a gradual, cure." According to this report the patients were so numerous that Wesley had to divide them at Southwork and treat them "part at the Foundary, others near St. Paul's, and the rest near Seven Dials," London, "and while hundreds, perhaps thousands, have received unspeakable good, I have not known one man, woman, or child to have received any hurt thereby."

In 1781, Cavallo, a distinguished scientist of England, published his "General Rules for Practise," intended as a guide for physicians, after 4 years directed to the study of static electricity. He advised: "In judging what cases are proper to be electrified, experience shows in general all kinds of obstructions, whether of motion, circulation, or secretion are very often alleviated by electricity. The same may also be said of nervous disorders."[7] Cavallo adopted control methods and technics of investigation and was objective in his approach. He states: "In order, therefore, to give a proper estimate of the value of a remedy, it is necessary to show the proportion between its successes and failures without being amazed at one case and neglecting many others."

Medical use of static electricity in hospitals, the first recorded in London, was at the Middlesex Hospital, 1767, and the St. Thomas Hospital, 1777. At St. Thomas Hospital, the surgeon, John Birch, in 1799, contributed an essay of 50 pages to John Adams' book, "An Essay on Electricity."[8]

Any review or summary of medical electricity would be incomplete without reference to the contributions of the physician Galvani and the scientist Faraday. Galvanism, the continuous, the direct, or the medicinal currents are terms that have been used to denote another type of current discovered by Galvani, the distinguished physiologist and physician, a co-worker with the physicist Volta. In 1790 Galvani observed that convulsive seizures could be produced in the limbs of a dead frog when muscle and nerve were touched simultaneously with certain metals. His "new" current, as opposed to the "disruptive" current of the static electricity from the Leyden jar, possessed therapeutic power; upon nerve and muscle tissue it exerted a rejuvenating and revitalizing effect, remembered by all physicians in their preclinical physiology studies. It gripped the minds and imaginations of the great Priestly, discoverer of oxygen, the immortal Faraday, Ravendish, Humboldt, Oersted, Ampere, and Sir Humphrey Davy. It gave rise to a new school of electrotherapy headed by Remak of Berlin, finally culminating in fierce rivalry between the advocates of Galvanic and the subsequently developed Faradic currents.

In general, the "Faradic" currents are produced by mechanical devices that transform the direct current (Galvanic) through a process called induction, which consists of two essential parts, primary and secondary induction coils and an interrupter. In passing through these the voltage is increased while amperage is decreased; the interrupter "makes and breaks" the current, giving it an alternating effect. For an illuminating yet understandable discussion of medical electrical energy currents, the "busy physician" or others concerned are referred to the excellent chapter on "Physical Characteristics of Electrical Energy Used in Therapy" by Howard A. Carter,[9] in the Handbook of Physical Medicine and Rehabilitation of the American Medical Association.

As the champion of Galvanic therapy, Remak principally introduced this current to the medical profession, but "Duchenne discovered, developed and perfected so completely the properties of induction currents in medicine that little except refinements of his principles has been added since his day. His classical work was done between 1847 and 1855. He discovered the motor points of muscles; he made the distinction between primary and secondary coils; he recognized the difference in muscular effects between the coils of heavy and those of fine wire, and he taught the principle of concentrating the action of the current upon the locality which he sought to influence."[7]

Strictly from a scientific point of view there is no such thing as "new" electricity any more than there could be "new" water, but because of their universality in nature new uses may be discovered for electricity or water. Fundamentally, electricity is always electricity, as water is always water, whether it is in the form of steam, ice, snow, chemical union under myriads of conditions, or in a millrace to produce energy. Benjamin Franklin proved the oneness of the electricity of the thunderbolt and the earth which was static electricity, for no direct current form of electricity was known at that time. The latter remained unknown until the time of Galvani and Volta. "The immortal Faraday," still more technical and experienced in physical laboratory sciences than Franklin, proved in the laboratory the identity in essence of all electricity, even though in physical reaction they were as far apart as heat and force. His practical contribution to all science today, even in the atomic age, is that the "work done" by electricity depends upon relative variations of the volume, resistance, continuity or intermittency of currents, mechanical variations in methods of generation, and discharge. It is important to keep in mind, however, that without the medical experiments of Duchenne, Cavallo, Remak, and Galvani, the medical aspects of electricity would probably still be shrouded in the realm of speculation, skepticism, and doubt.

In spite of the carefully controlled experiments of world-renowned scientists in the fields of physiology, physics, pathology, and therapeutics, skepticism exists in the minds of many at present as to whether therapeutic benefits may be derived from any electrical device. This is understandable, for two variable factors are concerned: (1) The "work done" factor of Faraday must be complied with; in other words, a suitable device to get the desired results must be made available; and (2) knowledge of the mechanical operation of the device and the desired results to be obtained by the physician are likewise paramount. These factors may mean the difference in success or failure with electrical devices, as history most clearly records. To make a point, but sound ridiculous again by comparing the physical aspects of electricity and water, if we have the desire to create steam in a boiler we would hardly expect to obtain results by placing a block of ice in a cold firebox; or vice versa, if we want to prevent contamination of food in our icebox, we would hardly expect results by inserting a jet of steam into it. The analogy is just as important in the use of electricity; if results are to be obtained medically, it is important to know the medical indication and the devices that are available for the use of electricity.

At the beginning of the 20th century highly developed scientific electrotherapeutic devices following the postulates of the advocates of static, Galvanic or Faradic currents were employed widely throughout the country. It was reported that at least one-fourth of physicians not only used them in their daily practice, but followed closely the precepts of Cavallo, Remak and Duchenne in their administration. The principal medical schools required a knowledge of the theory and practice of electrotherapeutics. The question arises as to what happened to cause physicians to abandon the use of medical electricity during the first few decades of the century. The answer may be found principally in the flooding of the market with low-cost Faradic machines, which shocked the patient but offered little in the way of therapeutic benefits. Many of these were purchased by the laity out of curiosity. Therefore, an important adjunct to medicine went into disrepute for a long time, during which "quacks" busied themselves with claims that could not be substantiated.

## INFRARED AND ULTRAVIOLET

In connection with any therapy device which emits heat to the body below red of the spectrum, such may correctly be termed infrared, *infra* meaning "below" the red. On the other end of the spectrum, "beyond" the violet, is the ultraviolet ray. Both of these for eons have been used in physical medicine therapy. "There is nothing new or mysterious about ultraviolet and the infrared rays."[10] The sun has given off ultraviolet radiations since the beginning of time, we have every reason to believe, as lovers of the out-of-doors and the beaches are well aware in experiencing "sun burn." The same is true of infrared, because ancient man must have known about it when lightning from the elements lighted forest fires. Both infrared and ultraviolet are manifestations of natural phenomena, but ancient physicians used them in therapy as far back as history records. The sun was considered the source of life and, therefore, was worshipped (Helios, Apollo). The ancient Egyptians and Assyrians devised various appliances which they placed on the roofs, and there they exposed their bodies to the rays of the sun, because they believed in the invigorating influence and great curative properties of sunlight, as well as its influence on the skin, and of its value in the sickroom.[11]

The ancients, and until recently modern man, have not had the means or methods to measure or compare the ultraviolet rays of the sun and the machines or implements designed and perfected by man himself. However, recent experimental data have become available showing that the spectral band of ultraviolet radiation of wavelengths shorter than about 3,150 angstroms (the angstrom unit of wavelength is 1/10,000,000 mm.), occurring in sunlight and in some artificial sources of radiation, if sufficiently intense and if the time of exposure is sufficiently prolonged, has the power of preventing and of curing rickets.[10] It is not my purpose to delve extensively into any electrotherapeutic method or device, and, as far as ultraviolet and infrared are concerned, these rays are most adequately and scientifically considered, with the knowledge that is available, by the Council article of the American Medical Association on the "Therapeutic Value of Ultraviolet Radiation."[12]

When compared with ultraviolet rays, those that are emitted by infrared differ in several important respects. The infrared lamp, stove, or heat pads, for instance, produce heat which is recognized instantaneously, and if too intense, a burning sensation is experienced immediately; in other words, a warning is given if a heating device is used. On the other hand, ultraviolet radiation at the seashore or with therapeutic devices may cause serious illness because of its delayed reaction. There is danger from the careless use of the so-called ultraviolet "lamps." Some of these, in fact, emit no ultraviolet radiation, and therefore cannot be compared to sunlight, and at the same time these may be dangerous, causing conjunctivitis, and with long exposure cataract of the eyes (coagulation of albumin). The Council on Physical Medicine and Rehabilitation categorically recognizes the place of ultraviolet in treatment. However, it emphasizes that this type of therapy is often exploited, and the views of the Council are therefore set forth as follows:

> "Either natural or artificial heliotherapy is used. The artificial sources of therapeutic ultraviolet radiation are the carbon arc lamp, the low voltage (hot) mercury vapor lamp, and the high voltage (cold) mercury glow lamp. For further information on the artificial sources of ultraviolet radiation the reader is referred to the chapter, Sources of Ultraviolet and Infrared Radiation Used in Therapy—Physical Characteristics, by W. W. Coblentz, Ph.D., D. Sc., in this book on page 73."[10]

## X-RAY OR THE ROENTGEN RAY

As the reader is aware by this time, the uses of electricity in medicine, as accumulated through the ages, are numerous, and because of the integrity of physicians, physicists, biochemists, and others associated with their use, its therapeutic value is unquestionable. It should be restated that electricity as we know it today had its beginnings in wonderment and was subsequently used exclusively in medicine. While Osler[13] pointed out in 1907 that "electricity is an important therapeutic agent," he emphasized that electric currents "became dangerous only when their energy reached the high degree necessary for industry. Before the dynamo there were scarcely any serious accidents. The first causes of death occurred when electricity was applied industrially." It is the amperage, so necessary for work in a dynamo, that has the paralyzing effect upon the heart, causing it to go into fibrillation, while high voltage itself as first used by Tesla and others is harmless. In fact, the human body creates and uses constantly an amount of electricity that is comparable to a 60-candle bulb. It is also worthy of note that electricity, like some other medical discoveries such as penicillin, was accidentally discovered. The literature upon the usages of X-rays in diagnosis and treatment is so voluminous that I shall deal only and briefly with underlying principles of its nature and how it was discovered.

Sir William Crookes in extended studies

(1877–1879) startled the scientific world with the announcement that matter was radiant, and declared that "particles shot off from the cathode ray possessed strange and remarkable properties."[14] Professor Wilhelm Conrad Röntgen, in 1895, while experimenting with a Crookes' tube, made a phenomenal observation: The Crookes' tube was enveloped in an opaque cover, when a nearby paper containing a fluorescent substance exhibited a most pronounced visible glow. "A new radiation had burst forth at the touch of genius; a new science had come into being."[14]

In order to produce Röntgen or X-rays, the new radiation, it is required for its production that a highly exhausted tube be employed, the essential factor being that the electric discharge must be made to take place in a high-vacuum tube, such as the Crookes' tube. The essentials of the tube require a cathode of such shape as to focus the cathode rays on a metal disc, such as platinum, which either is the anode or placed near it. When an electrical current is introduced into such a tube the electrical energy is transferred into X-rays, which radiate in all directions in straight lines, as light does from a central source (figure 1).

No diagnostic or therapy device employing electricity has been so extensively used as the X-ray tube. Hundreds of books and treatises have described its use. More recently radiologists and atomic energy specialists have, however, cautioned against its too extensive use. As contrasted with electric radiations, which are parts of the phenomena of life, X-ray radiations are accumulative and may be harmful in excess of 0.3 r per week for exposure during a normal 40-hour work-week over the life span of man; and it is probable that the National Committee on Radiation will reduce this number to 0.1 r per week. Any exposure to ionizing radiation produces permanent damage, and therefore X-rays should be used only for diagnostic purposes and in therapy only when other therapeutic methods are ineffective.

## High-frequency Currents

An occasion of tremendous importance in the sphere of electrical engineering, also medically termed the Fifth Medical Current,[15] took place in May 1891 before the American Institute of Electrical Engineers, when Nikola Tesla lighted lamps and heated wires to incandescence by passing currents harmlessly through his body, by the touch of his conducting hand. He termed the newborn electrical phenomenon "High Frequency," and it marked the beginning of the wireless wonders of telegraphy, telephony, radio and television, and extended the healing art traditions of Galvani, Faraday, and Duchenne. In simple terms, through "alternaters with a multiplicity of poles, and, by the introduction of transformers"[16] he had increased the electrical potential to an almost incredible number of volts which passed through the body

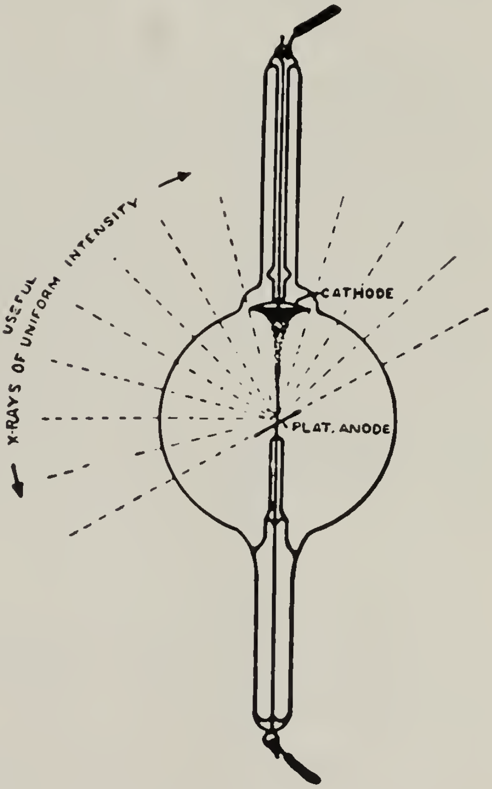

Fig. 1. Essential features of an X-ray tube.

without the slightest harm to the individual; this phenomenon may be compared with a garden hose which may direct either a forceful current of water or a fine mist; also adequately described by Monell[17]: "Over Niagara pours a mass of water that strikes the rocks with staggering force, but up from the falls floats an ascending mist of the same water, now transformed so exquisitely that it will not crush a flower."

A later description of high frequency currents that afford modern usage is furnished by Carter[18] in his chapter, "Physical Characteristics of Electrical Energy Used in Therapy":

> "An alternating current having a frequency of more than 100,000 cycles per second is alternating or oscillating so rapidly that no sensation of electrical shock is felt when applied to living tissues, but if the current is sufficiently intense there will be a feeling of warmth. In fact, if the high frequency oscillating is concentrated at a small point, for example, the wire point of an electrical cutting knife, the destruction of tissues may take place. Oscillating currents of the frequency mentioned are sometimes called diathermy currents (medical and surgical), d'Arsonval current, Tesla current and Oudin current."

## Diathermy

In a full chapter on "Medical Diathermy," Martin and Erickson[19] of the Section on Physical Medicine, Mayo Clinic, state:

> "Medical diathermy is based on the use of high-frequency currents for the generation of heat in the tissues of the body for therapeutic purposes. The frequencies of the currents used are sufficiently high so that nerves or muscles are not stimulated. The intensity used is sufficiently low so that the temperature developed in the tissue is below that required to destroy the tissue or impair its vitality. The high-frequency currents used for diathermy can be applied locally for the purpose of heating the superficial and deep tissues.
>
> "Medical diathermy can be classified in the following 3 main divisions, based on differences in wavelengths and on the sources of the high-frequency current: (1) microwave diathermy; (2) short-wave diathermy, and (3) long-wave diathermy . . . . The Federal Communications Commission has assigned definite bands in the range of frequencies and wavelengths to the medical profession and to the manufacturers of diathermic equipment. All modern diathermic apparatus must meet the requirements for frequencies and wavelengths of the Federal Communications Commission."

Some of the contraindications to the use of medical diathermy are as follows: peripheral vascular disease, heat sensitivity, adhesive strapping or moist dressings, hemorrhagic tendencies, metallic implants, pregnancy, profuse menstruation, malignant disease, osteomyelitis, effusions and edema, transcerebral application, anesthetized areas, tuberculosis, and thrombophlebitis.[19] But in their summary and conclusion Martin and Erickson state that medical diathermy is one of the most valuable sources of therapeutic heat available to the physician.

## Bio-Cold-Ray

Within the last few years a new electrotherapeutic device has been discovered and patented, which offers much promise because of its beneficial effects and lack of harmful sequelae. Bio-Cold-Ray is an electrical generator capable of generating energies in the radio frequency spectrum. This instrument, registered and patented, develops very long waves in an area of the spectrum which appears to have been relatively unexplored medically.

Presently commonly employed medical currents, according to the classification of Kovacs,[20] fall either into the category of "low tension and low frequency," such as the galvanic and faradic (those with an alternation not exceeding several hundred per second, which exert ionic effects) or "high frequency" currents, such as shortwave and microwave (those with alternations of over 1,000,000 per second, which produce thermal effects). Review of the patent and evaluation of the test data as recorded by the Electronics Laboratory of Pratt Institute, Brooklyn, New York, would indicate that Bio-Cold-Ray cannot readily be classified in either category outlined by Kovacs but rather in a field between the two.

This device, tested by the Federal Communications Commission at its laboratory at Laurel, Maryland, was found to qualify within the limitations of the F. C. C. Rules and Regulations. Bio-Cold-Ray is not therefore diathermy within the accepted meaning of the term, in that it is not meant to produce heat and does not to any appreciable or potentially harmful degree. From a description of the device by the manufacturer, the electricity reaches the body in the form of a spray from a vacuum tube containing certain gases applied to the body by the operator while an electrode is held in the hand or strapped to the patient. In this way a circuit is produced. There are no known contraindications, and it may be applied to tissues as delicate as the eye. In this respect it may be comparable to the spray, described by Monell,[17] that emanates from Niagara—harmless water, while that water which flows over the falls would have disastrous effects upon the body in its full force. Bio-Cold-Ray is particularly useful in causing granulation of tissues and healing of skin lesions, such as burns, poison ivy, varicose ulcers, and wounds from other causes. It is a particularly valuable therapeutic device in the treatment of sprains and also has a beneficial effect upon neuritic conditions in relation to the relief of pain, sometimes permanently. The full scientific discourse on the device will be covered in a subsequent article, "A New Electrotherapeutic Device for Treatment of Skin Lesions—Bio-Cold-Ray."

It is apparent to scientific investigators and others interested in electrotherapy that the application of electricity to the treatment of disease was not quackery in the beginning or since, because outstanding scientists of the centuries, including Galvani, Faraday, Tesla, and a host of physicians have testified as to its value. As recently as 1950 the American Medical Association published an excellent treatise on scientific application of electrotherapeutic devices, which incidentally has been revived with the ever-increasing importance of chronic illness (since communicable diseases largely within the first 3 decades of life have disappeared) because of the effectiveness of preventive and therapeutic treatment of these conditions.

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# OPERABLE CONGENITAL MALFORMATIONS OF THE HEART*

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## PART IV. SECTION 1. RARE AND UNUSUAL FORMS

MANY RARE and unusual congenital malformations of the heart are amenable to surgical treatment. A thorough knowledge of all possibilities must be kept in mind in the evaluation of a child with congenital heart disease. Relatively simple life-saving procedures may well be feasible in some cases, so that no possibility should be overlooked in attempting to arrive at an accurate diagnosis. Corrective procedures have been developed for a wide range of defects, and it is not unreasonable to predict that in the not too distant future almost every type of congenital cardiac lesion will be amenable to some method of correction. Diligence and care, therefore, should be exercised in establishing a definitive diagnosis as early as possible. When surgical treatment is feasible there will be an infinitely better chance of survival if operation can be performed before congestive cardiac failure and deterioration of the patient have ensued.

### Aortic Septal Defect

A direct aorticopulmonary communication results from an incomplete division of the truncus arteriosus into the aorta and pulmonary artery.[138] This defect occurs just above the semilunar valves in the first parts of the ascending aorta and the pulmonary artery.

The history and clinical findings are usually indistinguishable from those of a patent ductus arteriosus. Cyanosis is seldom observed except when cardiac failure is present. Frequently there is some decrease in exercise tolerance, and some degree of retardation in physical development is not uncommon.

A murmur is usually but not invariably present, which is usually continuous and has a systolic accentuation.[139] It cannot be differentiated from the murmur of a patent ductus arteriosus except that it is usually best heard somewhat lower, in the third and fourth intercostal spaces.[140] Occasionally the murmur is accompanied by a thrill. A wide pulse pressure may produce a typical water-hammer pulse.

Some cardiac and pulmonary artery enlargements are seen on X-ray and fluoroscopic examinations together with increased vascularity of the lung fields. The electrocardiogram may be normal but frequently shows some left ventricular preponderance. Angiocardiography is of no assistance in establishing the diagnosis. Retrograde aortography may clearly demonstrate the presence of an aortic septal defect [141, 142] and is a valuable aid in the diagnosis. The best method is to insert the catheter into the ascending aorta from the brachial artery and then inject the dye. In this manner an aorticopulmonary communication will be clearly visualized.[143] Venous catheterization demonstrates a left to right shunt into the pulmonary circuit.

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* This is Section 1 of the fourth of a series of articles on this subject. The previous articles have appeared in the May, June and July issues of the Medical Annals. Section 2 of Part IV, the last of the series, will appear in September.

The catheter may fortuitously pass through the defect into the aorta and be observed in the left anterior oblique and lateral views. The catheter enters the aorta more anteriorly than in cases of patent ductus arteriosus[144] and follows the ascending course of the arch in entering the descending aorta. This is in contradistinction to a patent ductus arteriosus where the catheter usually enters the descending aorta via the ductus.[145] When there is a reversal of the shunt from the pulmonary artery into the aorta, the oxygen saturation of the right brachial and femoral arteries after exercise may give valuable information. On effort the oxygen saturation of the brachial artery will be higher than in the femoral artery in cases of patent ductus arteriosus. However, in the presence of an aortic septal defect oxygen saturation will be identical, since the shunt is proximal to the origin of the innominate artery.[145]

Associated lesions are rarely present. A patent ductus arteriosus has been described,[146, 147] which in 1 instance[147] was associated with rupture of a dissecting aneurysm of the pulmonary artery into the pericardium.

Lesions which should be differentiated from aortic septal defect include patent ductus arteriosus and occasionally a high ventricular septal defect. Whenever the clinical findings suggest a patent ductus an aortic septal defect should be considered as a possibility. These lesions are about 1 to 2 per cent as common as open ductus.[60] The prognosis is much poorer than in the case of patency of the ductus arteriosus because of the greater degree of shunt involved in an aorticopulmonary communication of this type.

Successful surgical closure of an aortic septal defect was first performed by Gross[139] and subsequently by others.[142, 145, 148–150] If a thoracotomy is performed in the belief that there is a patent ductus arteriosus and none is found, an aortic septal defect can be identified by observing the point of maximum intensity of the thrill within the pulmonary artery.[139] With the use of hypothermia and cardiac by-pass even large defects may be repaired safely.[150] The ideal procedure is complete division and separation of the aorta and pulmonary artery, a separate closure of each vessel wall being made.[139] This mode of correction is feasible only when the defect is located a sufficient distance above the aortic valve to allow isolation of the area of communication from the surrounding great vessels.[149] Inflow occlusion may facilitate repair.

## Aneurysm of the Sinus of Valsalva

The sinuses of Valsalva constitute the area just above the aortic ring, bounded by the cusps of the aortic valve and the inner wall of the aorta. The sinuses are most conveniently designated as right and left coronary, which correspond to the origins of the respective coronary arteries and posterior or noncoronary sinus. Congenital aneurysms of the sinuses of Valsalva are believed to be due to defective development of the distal bulbar septum.[151] Aneurysms most frequently involve either the right coronary or posterior sinuses. However, simultaneous aneurysms of all 3 sinuses have been described.[152] The right sinus of Valsalva is in close relationship to the interventricular septum, thus accounting for the tendency for aneurysms in this location to rupture through the membranous septum into the right ventricle. Occasionally the rupture may lead into the left as well as the right ventricle.[153] The posterior or noncoronary sinus lies anterior to both right and left atria; therefore, aneurysms at this site may rupture into either atrium as well as the right ventricle, pulmonary artery and superior vena cava. Intrapericardial rupture from an aneurysm of the right sinus of Valsalva has also been reported.[154] Rupture of an aneurysm of the left coronary sinus is very rare.[155]

There appears to be a striking predominance of male patients with this lesion, and rupture usually occurs in early adult life. The result is a sudden massive arteriovenous fistula. The symptoms and signs follow a characteristic sequence and are of important diagnostic value.[156] There is usually an abrupt onset of severe pain in the chest or upper abdomen in a person who has apparently been in excellent health. The pain is usually substernal and may be precipitated by exertion. It closely simulates the pain of an acute myocardial infarction. After a period of several hours it subsides and an almost symptomless phase follows.

A loud harsh murmur, which is superficial in character and is accompanied by a coarse thrill, appears with the onset of symptoms. The murmur is best heard over the center of the sternum in the second, third and fourth intercostal spaces and characteristically occupies both phases of the cardiac cycle with either systolic or diastolic accentuation.[156] Right-sided congestive failure develops toward the end of the latent period, at which time the signs of either aortic or tricuspid incompetence develop.[156] This is manifested by a collapsing pulse with a wide pulse pressure and systolic pulsation of the liver or neck veins.

The electrocardiographic findings are inconstant and therefore afford little diagnostic assistance. Right axis deviation associated with a suspected aortic incompetence may, however, be helpful.[156] Burrowing of an aneurysm into the membranous portion of the interventricular septum sometimes causes conduction disturbances.[157, 158] Fluoroscopy may demonstrate expansile pulsations in the smaller branches of the pulmonary artery.[159] Cardiac catheterization can be very helpful in establishing this diagnosis.[156] These studies demonstrate an increase in the oxygen saturation of the blood in the right auricle and the right ventricle, thus indicating an arteriovenous aneurysm.

Recently attention has been directed to the diagnosis of unperforated aortic sinus aneurysms by Steinberg and Finby.[160] In a study of 9 cases these authors found associated anomalies which included coarctation, pseudocoarctation (kinking of the aorta), arachnodactyly, and congenital mitral and aortic stenosis. The only clue to the presence of an unperforated aortic sinus aneurysm was a moderately loud systolic murmur heard over the precordium, especially to the left of the sternum. They, therefore, concluded that the presence of such a murmur in combination with one or more of the commonly associated defects should arouse suspicion of an aortic sinus aneurysm. A definitive diagnosis is provided by angiocardiography which shows a generalized dilatation of the aortic sinuses. Aortography may also demonstrate the lesion.[161]

A vascular tract forming a communication between a sinus of Valsalva and the right ventricle without an associated aneurysm has been described.[162, 163] This abnormal communication is believed to represent an accessory coronary artery with retention and enlargement of an early embryonic channel.[163]

The differential diagnosis of a ruptured aortic sinus aneurysm includes perforation of an aortic aneurysm into the pulmonary artery and rupture of an aortic valve cusp. In the former hemoptysis is a common symptom and there is no evidence of tricuspid incompetence. In the latter the murmur is diastolic, and left ventricular failure develops. Although the murmur may be indistinguishable from that of a patent ductus arteriosus, the sudden onset of severe pain would ordinarily characterize rupture of an aneurysm of the sinus of Valsalva.

Unsuccessful attempts to close a perforated aneurysm of the sinus of Valsalva have been made.[156] In 1 case a satisfactory closure was effected.[164] In a 17-year-old girl rupture of a congenital aneurysm of the sinus of Valsalva occurred during an attack of subacute bacterial endocarditis. One year later, in the presence of a staphylococcal endocarditis the fistula was surgically repaired under hypothermic anesthesia through a right ventricular approach. Despite a technically satisfactory procedure, the patient died 14 days postoperatively from a staphylococcal pyemia. Recently this lesion was successfully closed in a young soldier.[165]

According to Burchell[166] aneurysms of the right coronary sinus rupture into the right ventricle, whereas those involving the posterior or noncoronary sinus rupture into the right auricle. In the latter circumstance, therefore, surgical approach from the atrial or aortic side could be attempted without involvement of the ostia of the coronary arteries.

### CONGENITAL COMMUNICATION BETWEEN THE LEFT VENTRICLE AND THE RIGHT AURICLE

An unusual form of congenital malformation consists of a communication between the left ventricle and the right auricle. This anomaly involves a left ventricular-right atrial shunt resulting from a high interventricular septal defect and a defective septal leaflet of the tricuspid valve[167] or a double triscupid orifice.[168] In a recent report of 2 cases of this anomaly an erroneous diagnosis of atrial septal defect was made. The authors point out, however, that the correct diagnosis may be suspected when there is catheterization evidence of a shunt of highly oxygenated blood into the right auricle together with the finding of a coarse systolic murmur and thrill over the midportion of the heart.

Closure of this defect has been attempted in 2 cases but without survival.[168] The ventricular septal defect was successfully closed through a right atrial approach, but the triscupid valve was irreparable. Recently, however, successful closure has been achieved.[169]

### CONGENITAL MITRAL STENOSIS

Congenital mitral stenosis is most frequently associated with other cardiac anomalies, usually a patent ductus arteriosus, coarctation of the aorta and aortic stenosis. The stenosis of the mitral valve in association with an atrial septal defect, the so-called Lutembacher syndrome, is usually of rheumatic etiology.[170, 171] On the other hand, isolated congenital mitral stenosis is a rare anomaly. A review of the reported cases has recently been summarized.[172]

Symptoms usually date from birth but may not develop until as late as the age of 2 years. Failure to thrive, cough and dyspnea are common. Cyanosis is rarely present, and congestive cardiac failure occurs early in the clinical course.

Accentuation of the second pulmonic sound is usually present as well as an apical systolic murmur. A diastolic murmur has been heard in rather less than half of the recorded cases.

The electrocardiogram shows marked right ventricular preponderance together with evidence of left or right or combined atrial enlargement. X-ray films and fluoroscopy usually reveal an enlarged heart with increased pulmonary vascularity. Left and usually right atrial enlargement may be seen together with hypertrophy of the right ventricle. Angiocardiography is especially helpful in establishing the diagnosis. The enlarged left atrium retains the dye for an abnormally long period of time. Elevated pulmonary artery and pulmonary capillary pressures without evidence of a shunt may be demonstrated by cardiac catheterization.

Lesions which may be considered in the differential diagnosis are patent ductus arteriosus, ventricular septal defect including Eisenmenger's complex, and atrial septal defect. All these anomalies may be excluded by the absence of a shunt. Primary pulmonary hypertension may be eliminated when there is isolated left atrial enlargement. The clinical findings in stenosis of the common pulmonary vein closely simulate those of congenital mitral stenosis. Angiocardiography may be of value in demonstrating enlargement of the right auricle with a small left auricle in cases of stenosis of the common pulmonary vein.

Surgical treatment of congenital mitral stenosis presents a more difficult problem than cases of rheumatic etiology. In the latter the valve cusps are fused, and commissurotomy may result in the restoration of normal valvular function. In congenital mitral stenosis, however, in which the entire valve is developmentally deformed, commissurotomy cannot do more than enlarge the valve aperture with the production of some degree of mitral regurgitation. Surgical attempts for the alleviation of symptoms have usually proved unsuccessful.[173, 174] However, 2 patients in whom commissurotomy has been performed appear to have benefited by the procedure.[172, 173] Operation is only indicated when there is a functioning left ventricle.[172]

### STENOSIS OF THE COMMON PULMONARY VEIN

In this malformation the pulmonary veins enter an accessory chamber which is attached dorsally to the left auricle. This accessory chamber represents the dilated common pulmonary vein which has failed to become incorporated into the wall of the left atrium.[175]

A survey of the clinical and pathologic features of the reported cases of this anomaly has recently been made.[176] Symptoms may date from early infancy or may not appear until adult life, depending upon whether a communication is present between the accessory chamber and the left auricle. Paroxysms of dyspnea with cyanosis and syncope are frequent.[176] There may be repeated respiratory infections and episodes of hemoptysis. Congestive failure frequently develops rapidly.

On physical examination the heart may be enlarged, particularly to the right of the sternum. A loud and snapping second sound and a slapping apical first sound may be present.[177] Apical systolic and diastolic murmurs have been described,[176] and in several reported cases no murmur has been heard.

The electrocardiogram shows marked right ventricular preponderance and enlargement of the right auricle. X-ray or fluoroscopic examinations reveal generalized enlargement of the heart, increased vascularity of the lung fields, and a large pulmonary artery. Cardiac catheterization studies are helpful in demonstrating marked hypertension in the right ventricle as well as the pulmonary arteries and capillaries without evidence of a shunt.

This lesion may be confused with mitral stenosis, primary pulmonary hypertension and intra-auricular tumor. The catheterization studies will be helpful in differentiating these conditions.[177] Most difficulties, however, arise in ruling out mitral stenosis. If a preoperative diagnosis of the latter has been made and an exploratory thoracotomy fails to verify the presence of a stenotic mitral valve, digital exploration should be extended to the posterior part of the atrium. In addition, during surgery, pressure recordings demonstrating hypertension in the pulmonary veins with a normal left auricular pressure should give strong presumptive evidence for stenosis of the common pulmonary vein.

## ANOMALIES OF THE AORTIC ARCH

### COMPLETE INTERRUPTION OF THE ISTHMUS OF THE AORTA

Absence of the isthmus of the arch, which lies between the origins of the left subclavian artery and the ductus arteriosus, is one of the rarest anomalies of the aorta. A hypoplastic aorta gives origin to the brachiocephalic vessels but has no communication with the descending aorta. Instead, the continuation of a widely patent ductus arteriosus arising from the left pulmonary artery forms the descending portion of the aorta. A bilateral ductus arteriosus associated with interruption of the aortic arch has been described.[178] In this case the left ductus was continuous with the descending aorta, while the right subclavian artery arose from the right ductus arteriosus and a small aorta gave origin to a right and a left common carotid artery. This condition is ordinarily incompatible with life past early infancy unless there is an associated intracardiac shunt.

The history and physical findings in no way differ from those of a preductal coarctation, which has been previously discussed. An unusual finding of clubbing and cyanosis of the left hand and both feet with no involvement of the right hand has been described in a child who was found at operation to have a small aorta from which arose no intrathoracic branches.

The left subclavian artery originated from the ductus which was continuous with the descending aorta.[179]

The same studies which have been indicated for the diagnosis of a preductal coarctation apply to this condition. Complete interruption of the aortic arch with reversal of flow through the ductus has been demonstrated by retrograde aortography.[143]

Successful surgical repair of this defect has recently been reported.[180] It was accomplished by an anastomosis between the base of the left subclavian artery and the descending aorta after its division from the pulmonary artery. When this is technically impossible the use of aortic homografts, as suggested on experimental grounds by Baffes,[181] would appear to be the best method of repair.

### KINKING OF THE AORTA—PSEUDOCOARCTATION

Traction may be exerted on the aortic arch by the ligamentum arteriosum thereby producing a kink in the aorta at this site. The lesion is probably related to either an unusually short ligamentum arteriosum or ductus or an abnormally long aortic arch.[182] One case of this anomaly has been associated with an aneurysm of the sinus of Valsalva.[160]

The patient is usually asymptomatic with normal femoral pulses, and its importance lies in the fact that it commonly simulates a mediastinal tumor or a true coarctation on roentgenologic examination. A systolic murmur heard best at the base of the heart and transmitted to the vessels of the neck is usually heard.[182] The murmur is probably the result of turbulence in the region of the aortic kink.

The diagnosis is best made from a good left anterior oblique or lateral X-ray film.[182] A rounded area of increased density in the left upper border of the mediastinum seen in the anterior-posterior projection has been suggested as being of some diagnostic help.[183] However, angiocardiography or retrograde aortography may be necessary to provide an unequivocal diagnosis.

No surgical intervention is necessary in this type of defect; therefore, it is of the utmost importance to differentiate the condition from true coarctation of the aorta.

### INCOMPLETE AORTIC RING IN ADULTS

An incomplete aortic vascular ring is most commonly produced by a right aortic arch with a left ligamentum arteriosum which together form a constricting ring around the trachea and esophagus. Very rarely the compression is caused by a left aortic arch and a right ligamentum arteriosum. Occasionally, additional anomalies of the aortic arch are present, in particular an aberrant subclavian artery.

In contradistinction to a complete vascular ring which usually manifests itself in early infancy, this incomplete variety frequently remains symptomless or may be discovered only during a routine X-ray examination. Symptoms, if they occur, usually appear during the third or fourth decade.[184] Dysphagia, sometimes associated with regurgitation and postprandial discomfort, is the predominant complaint. Dyspnea, cough and hoarseness due to compression of the recurrent laryngeal nerve are less constant symptoms. Substernal pain which is related to the ingestion of food may be present.

X-ray films may demonstrate a right aortic arch with tracheal compression. However, the diagnosis is confirmed by an esophagogram which identifies the area of constriction, usually located opposite the fourth thoracic vertebra.

All lesions of the superior mediastinum which may cause esophageal and tracheal compression must be considered in the differential diagnosis. The fact that an incomplete aortic ring may suddenly cause symptoms in adult life should always be kept in mind. An esophagogram will confirm the diagnosis.

Division of the constricting ring will usually give relief of symptoms; however, the results are not as dramatic as in the infant.[184] If there are no symptoms and the condition is discovered incidentally on radiologic examination, surgery is not indicated as an elective procedure.

### TETRALOGY OF FALLOT: THE OPERATIVE IMPLICATIONS OF VARIATION IN THE POSITION OF THE AORTIC ARCH

A right-sided aortic arch is present in approximately 20 per cent of cases of tetralogy of Fallot. The upper part of the descending aorta lies on the right side but usually crosses to the left in the lower third of the thorax. The branches of the aortic arch commonly form a mirror image of the normal arrangement, the first branch being the left innominate artery.

When the aorta descends on the right an anastomosis can usually be performed between the left subclavian and the left pulmonary arteries. In 1 case,[185] which was complicated by the presence of a persistent left superior vena cava, the Blalock-Taussig procedure was technically impossible and a Pott's anastomosis was successfully accomplished on the left. This meant the creation of a functional double aortic arch. In rare instances, when the left subclavian artery cannot be identified, or when the left pulmonary artery is too small, an anastomosis may be created between the ascending aorta and the main pulmonary artery.[186] This method of surgical attack, however, has many inherent dangers, in particular the creation of too large an opening and obstruction of the left coronary artery. A procedure of this type, therefore, should only be attempted when other methods of anastomosis are not technically possible.

In the presence of a right aortic arch and a left descending aorta, the left subclavian artery is occasionally of inadequate length and a Pott's procedure may then be used.[187] Blalock has mentioned a case of tetralogy of Fallot in which there was a bifid aorta. Treatment consisted of division of the smaller arch with anastomosis of its distal end to the left pulmonary artery.[187]

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# *President's Page*

## THE COST OF MEDICAL CARE

Medical costs are steadily rising. Public opinion polls and leading newspaper and magazine articles indicate that the public is concerned. Many people feel that doctors' fees are too high. Unfortunately for physicians, most individuals do not differentiate between doctors' fees and hospital charges. Patients are not impressed by the argument that the cost of living has increased more than our fees in the last twenty years. They only know that being sick is too expensive and they have difficulty fitting it into their budgets.

Faced with the same problems—rising costs, high taxes and hospital expenses, doctors, like other people, often find it difficult to understand why patients complain about their bills or pay them last of all. Few things cause greater impatience than to have an individual explain his inability to pay one's professional fee because he has to keep up payments on his new home, his automobile, and his television set.

Perhaps the best explanation is that sickness is always unexpected and many are unprepared for the cost involved. Health is taken for granted. Since the Great Depression when New Deal measures were instituted, there has been an increasing demand for protection against sickness and loss of wages. I am convinced that if private enterprise fails to satisfy the public, then the Government will take over.

Today's economy is based on credit and installment buying. If people had to pay in full for cars and homes, the automobile and building industries would fail. Most earnings are already allocated for installment payments, a part of which go for life insurance, automobile insurance, and health insurance.

More than half of the people in the United States have some form of hospital insurance and prepayment medical insurance. But they want greater protection, wider coverage, and it appears they are willing to pay for it provided it will take care of their medical expenses.

I believe that we can be of service to the public and the medical profession by encouraging prepayment medical plans. Then patients can ask for medical care when they want it and rarely complain about the expense when it is taken care of under such arrangements.

We have an opportunity to guide and develop Blue Shield Plans, most of which are fostered by medical societies, and thus assume the leadership in providing greater protection under voluntary prepayment medical plans.

James W. Watts

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# *Editorials*

## SNEAK PREVIEW OF THE 26th ANNUAL SCIENTIFIC ASSEMBLY

If you want to get a good seat for this year's Scientific Assembly, you'd better come early. Although plans are only half completed, it is already evident that this one will be a lulu. The theme, the plan and the promise are, to coin a phrase, colossal.

Have you ever seen live television, in full color, on a screen large enough for 300 to view at one time? Have you ever sat in on one of the CPC's conducted by the group that brightens the pages of *The New England Journal of Medicine*? Have you ever attended a medical circus with two rings of all-star performers? All of these will be yours for 3 days, October 14–16, at the Hotel Statler in Washington, D. C., during the 26th Annual Scientific Assembly of the Medical Society of the District of Columbia.

"World Medicine" is the theme for this great Assembly. Dr. Paul Dudley White, physician to presidents and kings, will give the keynote address on Monday morning. Wednesday evening, at the annual dinner of the Medical Society of the District of Columbia, the members and guests of the Society will be addressed by the one man who has been President of both the Canadian Medical Association and the British Medical Association and who now is Consultant General of the World Medical Association, Dr. T. Clarence Routley.

And spaced between these two highpoints of

*Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.*

the program are many other significant and informative events that no one will want to miss. There will be large screen, color television each day, presenting a program planned for the occasion by Dr. Paul Schaefer, Program Director, Television Division, Walter Reed Army Medical Center. A particular feature of the television part of the program will be a "How-to-do-it" series, in which there will be shown, among other things, precisely how to search for and remove a foreign body from the eye—an eye a yard wide on the screen!

Panel discussions are planned to cover a wide variety of interests. Each panel will be led by a distinguished out-of-towner: Dr. Owen H. Wangensteen, Chief of Surgery at the University of Minnesota; Dr. Leon Schiff, Professor of Clinical Medicine, University of Cincinnati; Dr. Harold Jeghers, formerly Professor of Medicine at Georgetown University, now Professor of Medicine at New Jersey's new medical school, Seton Hall; Dr. George Anderson, Assistant Professor, Department of Obstetrics, Johns Hopkins University; Dr. William Dameshek, Director of the Blood Research Laboratory, New England Center Hospital; and Dr. Henry K. Beecher, Chief, Department of Anesthesiology, Harvard Medical School. Programs of special significance are being planned for the nursing profession, medical technologists, medical students, and physicians' office assistants. Topics for discussion include The Anemias, Postanesthetic Care, Gastrointestinal Bleeding, Fetal and Neonatal Distress, Acute Intestinal Obstruction, Differential Diagnosis of Fever, etc.

Dr. Benjamin Castleman, Chief, Department of Pathology of Massachusetts General Hospital, has already begun to dig through his files for a CPC case to "stump the experts"; Dr. Castleman has promised to bring with him a clinician from Boston to serve as his sparring partner. (The case as presented in Washington will later appear in *The New England Journal of Medicine.*)

These and many other outstanding attractions will feature "the medical event of the year in the Nation's Capital." Scientific and technical exhibits and medical motion pictures will, as usual, attract large audiences. The Medical Society luncheon on Monday, always a popular event, will have as its guest speaker one of the outstanding medical figures in the country. Active and Life members will be entitled to free tickets as long as they last. Georgetown and George Washington University alumni will vie with each other to put on the best luncheon program. Each of the social and scientific events contributes to the excellence of our meeting, which has grown to have the third largest registration among the state medical societies.

Dr. Alfred E. Brigulio, General Chairman, Committee on Arrangements, has been working many months on his plan of operation, selecting committee chairmen and impressing them with their responsibilities. Ted Wiprud has been out prospecting for gold among the technical exhibitors and special sponsors and says he knows where the money is coming from to put on this most ambitious program.

NEW PRESIDENT OF HEART ASSOCIATION

Dr. BERNARD J. WALSH (left), retiring President of the Washington Heart Association, congratulates Dr. ANDREW G. PRANDONI, who was elected President of the Association at its annual meeting, June 24, So be sure your dues are paid up, make a date with your wife for the annual dinner, and mark out the pages on your calendar. Truly you will not want to miss the 3 big days of the ASSEMBLY this fall!

T.M.P.

## FEE SCHEDULES IN MEDICAL PRACTICE

The private practice of medicine is, today, reaching the socioeconomic crossroads. The rapid advance of all types of voluntary insurance plans plus the growing interest of the Federal Government in this area have created an urgent atmosphere of decision for the physician. He cannot permit anyone or any group to assume the prerogative of determining his future. It is not of our choosing that the crux of this problem rests upon the concept of the proper usage of fee schedules.

How, then, should this future be determined? Voluntary insurance plans are going to expand further. Shall they expand by means of contractural agreements based upon full service and published, fixed fee schedules? Shall their expansion instead rest upon the integrity of the individual physician and his faith in his colleague? For several years we have been told that a fixed-fee, full-service plan protecting subscribers to a certain income level is the only realistic approach to health insurance. This term "realistic" is bandied about freely by the disciples of the full service approach, but what they are actually expressing is a lack of trust in the physician. At the American Medical Association Meeting in New York this June one of the earliest apostles of this philosophy stated that we should be "realistic" and accept the principle that medicine is now a "public utility" and should be subject to the same controls. If this be realism, I want no part of it.

Dr. David B. Allman, the new President of the American Medical Association, pinpointed the problem in his first address to the House of Delegates of the Association. He said " . . . I should like to make one general comment on all third party contractural agreements which call for fixed fee schedules. My concern in this area is *not* related to physicians' incomes but to the fundamental dangers inherent in standardized fees. *Expediency*, laws and governmental regulations have encouraged us to accept fixed fees for specified groups, especially those in certain income brackets. We now find many prepayment plans *raising* their income ceilings to include a *majority* of our population. In my opinion, the pressure for this action is related primarily to competitive factors. Where will this trend lead? It has the inherent danger of ultimately affecting the quality of care rendered and should be carefully watched.

"Traditionally, medicine has operated in a competitive climate that fosters incentive, rewards ability and smothers mediocrity."

He further states, "If we really believe in our contention that a leveling or averaging process inevitably tends to destroy individuality and initiative, then there is cause for concern and a need for constant vigilance on the part of *every* physician."

What, therefore, is the place of the fee schedule in medical practice? Any published, full-service, fixed-fee type of schedule is basically wrong. Although it is not intended, the implication carried in those insurance contracts which are based upon such schedules and to which the physician is a contractor is that the physician is restricted from charging unfairly. The physician, to point up Dr. Allman's fears, is required (in order to participate) to sign a contract agreeing to stipulated fees for his service regardless of his ability, degree of training, or experience. This is frequently the governing factor in the acceptance of such a contract by a group. It would be naïve if we were to believe that the holding of a physician to an already agreed sum was not pointed out during the phase of negotiation for coverage.

We are told that we have an obligation to adhere to these types of contracts because we are dedicated in our profession, first, to giving service to our patients without hardship. If we believe in the principle of giving service in this way, and if it is the policy of our Society, then we have a moral obligation to make available full-service contracts at the same fee schedules to every insurance company in the District of Columbia. There is not one company that would not be delighted to be invited to participate in such an arrangement. This would result in many more persons having this service available, and every plan would be the plan your "doctor wants you to have." No physician desires to create economic hardship in the sick.

If guaranteed payment is the attractive feature of the full-service plan, any commercial carrier will agree to assignment forms in its group or individual contracts.

It is agreed that such a step would be very unlikely, and I mention it only as a way in which the philosophy of full-service contracts should be used properly if the policy of our Society remains unchanged. The proper committees of the Medical Society would be responsible for adjusting the fee schedules as needed and it would work very well.

We in the District of Columbia are now faced with impending Federal Employees' health legislation. The bills before Congress at this writing all include a choice of full-service plans. If this philosophy becomes law we will have price control in medicine in this city. The result would be that regardless of how well intentioned were our representatives, they would be subject to the wishes of the subscribers, the Federal Employees unions, and the Congress. It is my firm belief that if we resist any contract which would include published, fixed-fee schedules and make these sentiments known, we can avoid this regimentation. This would mean that we must by strength of individual opinion change the policy of our Society. The "plan your doctor wants you to have" is properly a subscribers' plan, not the doctors' own plan. If we, as Participating Physicians, prefer the type of Blue Shield operation carried on in many other states, let us say so. This will make our own Blue Shield plan stronger. Let me borrow the phrase, "Let's be realistic." If we do not alter our concept of how a fee schedule should be used, we will sacrifice our birthright to practice medicine as we wish.

An example of a plan which is based upon trust in the individual doctor is in Wisconsin. There the physicians went into a service plan with no published fee schedule and no income ceiling for participants. They have been advised to charge their customary fee, and the Wisconsin Physicians' Service will pay the bill. According to their own Secretary, they have had no real difficulties or disappointments. In this same state the Medicare Program has been carried on without a published fee schedule, for individual members were made aware that the law did not specifically require one. They complied with the Defense Department directive and composed a fee schedule based on fees already charged throughout the state. They did not publish this, but once again asked the individual doctor to submit his usual bill and it would be paid. Three neighboring states have adopted the same plan and process their claims through the Wisconsin State Society, all without using a published fee schedule. According to both the Department of Defense and the State Society, there has not been a single bad experience. These are men of both vision and faith in the field of health insurance. They have shown a trust in their colleagues and have given excellent service to their subscribers. Are our physicians less to be trusted than these men of the Midwest? The fees have varied, but despite the vast expanse of the state with varying areas of prosperity, there have been no actuarial difficulties in determining premium rates.

Other states, courageous enough to follow this lead, have indicated a desire to do away with the published, fixed-fee schedule in the Medicare Program. Florida has already done so. Ohio, Indiana, Rhode Island, and others have stood firm. It appears now that the majority of states will renegotiate their contracts on this principle. There is every indication that the administrators of the Program in the Department of Defense have been sufficiently impressed to agree on such a philosophy from their end.

This, therefore, is the proper usage of a fee schedule. We know in our own community what the average or maximum fees are at present. The various Sections of the Society have turned these schedules in to the Society. Would it be too hazardous for us to depart from the fixed-fee schedule arrangement? The term full service is simply semantics. Each time we send a patient a bill at the conclusion of his illness it is for the full illness. The surgeon and obstetrician frequently agree on a stipulated fee before the care is given. This is full service, but it is full service based upon our own integrity and understanding of the patient's circumstances. If the patient has a Blue Shield Plan, the payment would be just as guaranteed as before but we would remove the threat of regimentation, the drift toward mediocrity, and the pressure of constantly raising income ceilings. The plan could be opened to all, regardless of income, and we would be reaffirming the principle that the physician may be trusted to be fair and must no longer be bound by contract. Can anyone say in conscience that this would destroy Blue Shield or that the intention of this philosophy is toward that end? Let us be realistic—I borrow the phrase again—and look ahead. If we do not trust one another, how can we merit the trust of others?

William B. Walsh, M.D.

## USE OF TRANSAMINASE

Glutamic-oxalacetic transaminase (GOT) is being determined routinely in many clinical laboratories in this area. The occurrence of false positives and false negatives in patients with suspected myocardial infarction has been brought to our attention. To minimize these pitfalls, we should like to reëmphasize certain facts concerning the use of this test.[1]

First, in patients with so-called coronary insufficiency with only ST and T wave changes in the EKG, the serum elevation of GOT is a transitory one, observed in only 25 per cent of such cases. A rise to an average of about 100 U/ML occurs in 30 hours and normal levels are reached again 60 hours after the onset of symptoms. Therefore, blood samples should be drawn immediately and serially for at least 3 days to establish a curve. This rapid rise and fall of the serum GOT activity is characteristic of myocardial infarction. High monophasic curves are more likely to indicate hepatic disease. In sharp contrast, acute hepatocellular disturbances exhibit a massive rise, whereas in chronic liver disorders the curve is moderately elevated and plateaued over a number of weeks.

Secondly, it is essential that every laboratory doing this test evaluate its results at least once a week to insure accuracy. A preparation of known transaminase activity for standardization of technic has become available recently through the Worthington Biochemical Corporation, Freehold, New Jersey. Duplicate samples have been run in the cardiac laboratory and a commercial laboratory in this area, and a discrepancy of as much as 53 U/ML has been noted. We will be glad to check samples upon request of appropriate laboratory directors.

Thirdly, hemolysis must be avoided, since it may increase GOT content by as much as 10–15 U/ML. The test should be carried out at a temperature of 25° C, or a correction factor should be used if this condition does not prevail. The transaminase content of the malic dehydrogenase used should be evaluated at frequent intervals by observing the rate of change in optical density just prior to adding a-ketoglutamate to the cuvette.

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[1] Ostrow, B. H., Ticktin, H. E., and Evans, J. M.: M. Ann. District of Columbia, 1957, **26**, 8.

And finally, it should be emphasized that the transaminase test is simply another means of appraising the frequently difficult problem of the diagnosis of myocardial infarction. Diagnosis should rest upon review of the total clinical and laboratory picture. Although there is some reason to believe that SGOT is perhaps a more sensitive indicator of heart muscle necrosis than the electrocardiogram, only time and autopsy correlation will provide the answer.

In summary, we suggest that the test be done immediately and serially for at least 3 daily specimens to establish an early curve, that laboratories doing this test check their procedure at least once a week, and that the clinician realize that this is simply another laboratory test that must fit into his already well-established armamentarium for the diagnosis of myocardial infarction.

B. H. Ostrow, M.D.
J. M. Evans, M.D.
*George Washington University Hospital*

## OUT OF GAS?

It's amusing, on occasion, to see a car stalled and out of gas—if it's not your own car. At times, also, it's amusing to see an individual "out of gas," but more often it's pathetic or tragic. And when the individual is a physician, who is supposed to be ministering to the needs of others, the pathos or the tragedy is even greater. These times of "hurry up," "live-it-up," "short cuts to the goal" use up a lot of gas, and soon we may have stalled by the side of the road.

As I sit here only 160 miles and 24 hours removed from a busy practice, the fuel has run low. And with time on my hands I begin to look for the sources of fuel. Physically, I'm sure my body needs recharging by rest and relaxation more often than I give it the chance. The occasional afternoon of golf, arriving on the first tee 20 minutes late, after all the pressures of the morning, helps only a little. The bridge game, played with the same intensity that has characterized the day's schedule or interrupted by the worry of patients who besiege the mind or the phone, is not a soothing, revitalizing experience. The evening of TV with its old movies, quiz programs, and sports events is only a partial answer. Every physician owes himself and his patients periodic removal from his practice and surroundings—the several days at the shore, the fishing trip in the mountains, the relaxing cruise—but not playing so hard that a different form of fatigue only takes the place of the original one.

And physical recharging is not enough. I know some physicians who keep their bodies in fine shape with regular exercise, regular hours and regular meals (we all wonder how) but who are slowed down to a mental crawl with no new ideas for a long time. Each new medical discovery does not stimulate critical judgment, only calls for a "shotgun prescription" for each patient. This physician needs a high-test fuel in the form of regular reading and study as well as periodic "motor tune-ups" at conventions and postgraduate courses, and an occasional contribution to the medical literature.

Of even greater tragic significance is the physician whose whole concern is his physical wellbeing and his mental alertness, but who has drained his spiritual tank dry. He has forgotten why he turned to medicine in the first place. His concern for the patient as a whole being has badly suffered. His interest in and sense of obligation to society have been sadly neglected. Instead of being a leader in spiritual and civic affairs he has become an unenthusiastic follower. This man has a real need for daily communion with his God, regular attendance at worship, and a willing participation in philanthropic and humanitarian affairs. Nothing is more important to God's creatures than a constant concern for His will and purpose for us. The whole physician is no exception.

Re-fuel regularly. Keep the body well, the mind alert, and, above all, the spirit lifted. Nothing is sadder than the physician who is "out of gas."

F.D.C.

## INFLUENZA

Editor's note: The Council on Public Health of the American College of Chest Physicians has prepared the following report, which has been slightly modified. Dr. Daniel L. Finucane, Director of Public Health for the District of Columbia, concurs in the suggestions it contains.

Influenza epidemics in the Orient, which have been reported in the press during the past few weeks, are being watched with concern by public health authorities in the United States and in other parts of the world. The first outbreak reported was in Hong Kong, and it was followed by others in Singapore, Formosa, the Philippine Islands, and other countries in the Far East, as well as in American military personnel stationed there and on ships returning to the United States.

The illness reported has in most cases been mild, characterized by fever, malaise, headache, mild respiratory symptoms, and a dry cough. Usual duration has been 2 or 3 days, few complications have been reported, and case fatality has been low. Attack rates, however, have been high—in some areas, as high as 50 per cent of certain population groups have been affected.

Isolates from these epidemics have been examined at the Walter Reed Army Institute of Medical Research, the Public Health Service Communicable Disease Center Virus Laboratory at Montgomery, Alabama, and at other laboratories in the United States. Virus strains were found to be similar to each other but quite different from prototypes isolated from outbreaks in the past. Complement fixation tests demonstrated that the strains were type A influenza virus, but antibody in human and animal antisera prepared against other type A strains did not inhibit hemagglutination by the new variants. No antibody has been demonstrated in sera from people residing in the United States. These strains represent a new set of antigenic variants which could circulate readily throughout the world. On the basis of these findings, the World Health Organization has alerted all influenza centers, and new strains have been distributed for further intensive studies.

Experience in the Far East indicates that influenza vaccines in current use do not protect against the new strain. Prototype virus has been submitted to several United States biologics companies, and they are preparing to manufacture vaccine which will probably be available in the fall.

In view of the extent and rapidity of travel between the United States and the Far East, this newly recognized strain of influenza will probably be introduced into this country. Our history of influenza, however, is such that outbreaks of any proportion are unlikely to occur during the summer months. There may be scattered groups of cases, traceable to individuals recently returned from the Far East.

The Public Health Service has taken steps to study and to help control any local outbreak that may occur. Health departments of all the states have already been informed about the situation. The Division of Biologics Standards of the National Institutes of Health is working with the pharmaceutical industry in expediting the production of vaccine. The Virus and Rickettsia Section of the Communicable Disease Center Laboratory (which is the WHO Influenza Center for the Americas) is preparing diagnostic reagents for the recently isolated strains and distributing them to regional and collaborating laboratories throughout the country and the Western Hemisphere. Studies are being carried on at this laboratory of all recently isolated strains of influenza obtained through the WHO. The National Office of Vital Statistics is keeping public health authorities informed about developments. The Division of Foreign Quarantine is informing persons arriving from affected areas that should they become ill they should see their physicians without delay. The Epidemic Intelligence Service of the Communicable Disease Center, with officers assigned throughout the country, is ready to assist state and local health departments in the investigation of any occurrence of influenza.

The key to the situation, of course, is in the hands of the practicing physician. His alertness to any cases of influenza-type illness among his patients—or of this kind of illness in persons recently returned from the Far East, or their families or associates—will provide the information needed to deal with the problem before it becomes widespread. It is urgent that such information be given promptly to local health authorities, to protect the community and the country from the possibility of a full-scale epidemic.

Physicians will undoubtedly consider a diagnosis of influenza in any patient with symptoms of upper respiratory disease. The definitive diagnosis can be made only through virus isolations in the acute phase or by comparative titers of serum from the patient when he is acutely ill and when he is convalescent. Virus isolations require nose and throat washings obtained preferably during the first 3 days of illness and while the patient is still febrile, although virus may be recovered as long as 7 days after onset. The patient should gargle 3 times using about 15 ml. of diluent (broth, skimmed milk or distilled water) and returning the washing each time to the paper cup. Some infective material may be brought from the trachea into the pharynx if the patient will cough. The washings should be transferred to a closed tube for transportation to the laboratory and tested as soon as possible. If a delay of more than a few hours is necessary, the fluid should be kept chilled at refrigerator temperatures. When longer periods of storage are unavoidable, the washing should be frozen and stored, preferably near −70 degrees C. Serum samples should also be taken, one during the time of illness and a second 2 to 4 weeks later.

Not all laboratories are prepared to do virus isolation and serology for influenza. The District of Columbia Health Department is prepared to do these procedures for all Washington physicians who desire them. Specimen kits are available upon request from the Bureau of Laboratories and Pharmacies, Room 6149, Municipal Center.

Physicians are urged to report to the Director of Public Health cases suggesting this type of epidemic influenza in order that the first signs of an outbreak can be detected.

## CORRESPONDENCE

Arlington, Va., July 3, 1957

To the President:

In reference to the recent evidence presented to the American Medical Society at its 106th meeting in New York by Dr. Peery, linking heart damage to brucellosis, we wish to reassure the members of the medical fraternity in the Washington area that brucellosis has been eradicated from all herds supplying milk to the Washington market.

Original action on the eradication of brucellosis was taken on August 3, 1950 by the District of Columbia and regulations specify that no milk can be sold in or shipped into the District unless it is from herds following the procedures approved by the Bureau of Animal Husbandry of the U. S. Department of Agriculture for the eradication of brucellosis. These procedures call for: (1) slaughter of all animals which are infected, (2) re-test of herd every 30 to 60 days, (3) subsequent slaughter of reactors until the herd has passed two consecutive negative tests. A third negative test in 12 months from the first negative test makes the herd eligible for certification. All heifers must be vaccinated at 4 to 8 months of age.

We would be glad to supply your members with any additional information regarding the brucellosis control program.

Very truly yours,
W. B. Hooper
*Secretary-Treasurer and General Manager, Maryland and Virginia Milk Producers Association, Inc.*

# ANNUAL REPORT OF THE PHYSICIANS' SERVICES COMMITTEE OF MEDICAL SERVICE*

It is a pleasure to report again to the Participating Physicians of Medical Service the activities of the Committee of Physicians' Services over the past year.

Although the Committee meets now every month and spends about 3 hours at each session, the total number of cases reviewed, and the amount of money involved in our deliberations, seems very small compared to the number of cases processed routinely through the Claims Department administration. The Committee considered problems in 235 cases involving approximately $25,000. In this same period of time approximately 117,000 claims were processed, and nearly $6,000,000 was paid out to area physicians by Medical Service through its Claims Department. This is indeed a splendid tribute to the organization so ably administered by Dr. A. C. Gray and Messrs. George McGovern, Alan F. Ridgeway and Arthur B. Carpenter.

While this is a striking comparison, it should in no way belittle the importance of the Committee. The majority of cases seen were complex and could have been adjudicated in no other way than by the combined efforts of the physicians' representatives of the various specialty groups who have served so diligently and faithfully during my tenure as chairman. I know that you will join with me in thanking them for the exceptionally fair and judicial thought given by them to all cases referred to the Committee. It is truly remarkable to see how quickly each new member appointed to the Committee becomes aware of the fact that only by complete understanding of the interests of every one—subscriber, individual physician, and the Plan itself (which means all of you as a group)—can an equitable and honest decision be made in any case.

Serving on this Committee, and indeed on the Board of Trustees, does not change any doctor's status as a Participating Physician, however. The welfare of his own group remains the same, but it becomes tempered by his responsibilities to the subscriber. Criticisms sometimes voiced over policy and over decisions made by these two groups seem to lack an awareness of this simple fact.

It is almost too obvious an observation to make that the total amount of money to be distributed must be determined entirely by the total amount paid in by subscribers. Yet the Committee is occasionally beset by claims and appeals from a small minority of the same physicians asking for extremely high fees, which, if paid, would quickly wreck the Plan for the benefit of these few individuals.

I should mention here that some claims have been appealed over the Committee's decisions to the Board of Trustees (which is, of course, a privilege accorded every Participating Physician), but in all these cases the decision of the Committee has been upheld.

In further support of the concept of the importance of the Committee, I wish to point out that its decisions often set a precedent which is followed thereafter by the Claims Department of Medical Service, and, in most cases, this has resulted in a liberalization and increase in monies paid out. I hasten to say here that the Committee has no authority to initiate any major change in policy on the handling of claims. It has been able to influence the Board of Trustees in this respect, however, and I shall return to this matter later in my report.

You may be interested in seeing a breakdown of the cases considered this year:

1. There were 38 appeals from subscribers involving eligibility in cases in which the contract had been in effect less than 10 months. Of these cases 20 were considered to be eligible and 18 not eligible. In those cases in which the Claims Department was overruled by the Committee on appeal, it has been the additional information supplied in the letter of appeal which usually enabled the Committee to come to a fair decision. I suggest that you give as complete and comprehensive information as possible in completing Physician Services' reports. This would undoubtedly obviate many other appeals to the Committee on other types of cases as well.

2. Appeals from physicians for additional fees numbered 95, of which 47 were allowed and 48 denied. The great majority of those in which additional fee was not given were cases considered by the surgeon to be unusually difficult or prolonged. As you well know, the fee schedule only represents an average of fees for the more difficult and easier

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* Presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, April 17, 1957.

cases requiring the same operation, and usually these balance out in time.

As operations requiring more time and more technical skill on the part of the anesthetist become increasingly frequent, the Committee has increased the payments made to him in such cases.

3. Fees set for procedures not listed in the fee schedule numbered 28. The Committee established a fee for pneumoencephalogram followed by chemopallidectomy for the treatment of parkinsonism. Six claims were received recently for bilateral ligation of the internal mammary artery for coronary insufficiency (so called "revascularization operation"), and a fee for this was submitted to the Board for approval.

New procedures are constantly being developed, and old ones improved. The Committee generally tries to evaluate fees in these situations in relation to the surgical purpose accomplished, and not to make a differential that would appear to endorse one procedure over another.

4. Complex or unusually difficult cases, including those involving multiple procedures, totaled 20 in number. One of these, a very serious burn case which involved care extending over many months, was considered by the Committee to be most unusual and deserving of payment to the physician in the amount of $1,000.00 and to the laboratory of $1,215.00 (a negotiated reduction in fee), as well as anesthesia fees totaling $390.00 for 39 separate surgical procedures. By usual standards the surgeon and the anesthetist might consider themselves ill paid but this Committee at least proved the flexibility of the Plan in unusual circumstances.

5. Cases in which 2 surgeons were involved in the same operation totaled 6 in number. The Committee is sympathetic to the idea of adequate payment to each surgeon involved in a complicated case, but has been rigid in its determination to prevent dissipation of funds to 2 surgeons operating in a field where 1 should be competent to perform the necessary surgery. An example of this latter type problem occurred when a gynecologist performing pelvic surgery called in a general surgeon to close the wound because of a preëxisting diastasis recti. The Committee authorized the payment of the usual fee for this operation divided into 2 equal parts. Fewer and fewer of these cases seem to come before the Committee. The Committee did allow a fair fee to 2 surgeons in a case of pelvic surgery where very dense intestinal adhesions seemed to require the help of a general surgeon in the best interests of the patient.

The Committee received an appeal from a surgeon who had performed a bilateral eyelid operation and had been paid the fee schedule allowance. His appeal was based on the fact that this operation, usually done in 2 stages, had in this case been performed in 1 stage to save loss of time from work as well as to avoid 2 hospital admissions. He felt that this justified a separate fee for each, and that after discussing the situation with his colleagues an agreement was reached that in the future this procedure would be done at 2 different times to accomplish this purpose. The Committee felt that the maximum allowance under the fee schedule had been made, and felt that such a practice should be discouraged. The moral and ethical implications here seem to be obvious.

6. Miscellaneous cases including laboratory charges totaled 14. In some cases the Committee has authorized full payment of laboratory charges although they may have been of considerable amount. In others, a payment has been negotiated with the laboratory as in the burn case already mentioned. In all cases only the laboratory work deemed entirely related to the surgery was considered payable. Laboratory procedures considered by the Committee to be unnecessary or duplicatory were rejected for payment, under the discretion invested in the Committee by the multiple procedure philosophy and precedent. Here I would like to pay tribute to the invaluable assistance of the pathologist member of our Committee.

7. Appeals for additional fees for care of complications numbered only 10. Four of these were allowed and 6 were rejected. An important change of policy has occurred in this category recently. Last year at this time I reported to you that the Physicians' Services Committee had recommended to the Board that some of these claims be considered more liberally, but at that time the Board felt satisfied with procedures being followed by the Committee and instructed it to continue the same policy.

This year the Board was informed that the Committee had been seriously concerned about the payment for complications for some time and it recommended that the Board give the Committee authority to consider payment for serious or major complications on the same basis as payments made for multiple procedures, with the understanding that the Committee would review each case to determine whether the complication was due to physiologic rather than surgical causes. Gangrenous appendicitis with the frequent complication of abscess formation would illustrate such a problem. Fracture of the surgical neck of the femur in the aged is another example.

The Committee has in the past always allowed for payment of complications arising in the natural progress of the disease such as in malignancies.

Since the Board has authorized the Committee to use more discretion in its handling of complications, a sizable point of friction and dissatisfaction in these cases may be alleviated.

The Committee moved for liberalization in another field when it asked for and received from the Board authorization for payment of half the fee schedule allowance for a D & C when this procedure is followed by a hysterectomy other than vaginal. This removed an inconsistency in that payment was being made for esophagoscopy and proctoscopy followed by resections, cystoscopy followed by nephrectomy, and bronchoscopy followed by pneumonectomy.

Although invaluable aid has been rendered by the advisory group of dermatologists in the adjudication of cases involving multiple skin lesions, a problem has occupied the Committee's attention in the field of plantar warts. The Committee has felt that the fee schedule allowance of $35.00 is not a practical yardstick in determining fees in many cases where multiple warts of various sizes are removed by various methods preferred by different operators.

The Board decided that the payment of $35.00 be limited to those plantar warts requiring radical excision with closure by suture or skin graft, and limiting the amount paid for those done by electrodesiccation or curettement to $15.00, and to $20.00 for nonradical surgical excision.

This decision of the Board is being carried out, but it has been objected to by representatives of the Section on Dermatology as being too restrictive and arbitrary and is now under further study. They have also objected to a ruling of the Board affirming a request by the Physicians' Services Committee that payment of the fee schedule allowances for removal of melanomas and basal and squamous cell carcinomas not be made unless the surgeon submits a biopsy report, with the understanding that, otherwise, payment would be made on the basis that the lesion was benign (provided the surgery was not performed for cosmetic reasons).

In all such problems which have been considered, the Committee has endeavored at times to protect the physician in the services he has rendered and at other times the Plan, to prevent a damaging drain on its resources.

The question of skin planing has not yet been resolved and is still under discussion by interested groups as to whether or not it represents cutting or incision as defined in the subscribers' contract. Although it might be utilized most frequently for cosmetic purposes, certainly there are instances after injuries where it might be the method of choice in treatment, and therefore make the subscriber eligible under his contract for such treatment.

The complexity of plastic surgery cases continues to be a major problem for the Committee even though a fee schedule has been submitted by this group of surgeons. The Committee therefore recently recommended that a Subcommittee on Plastic Surgery be established to screen these cases. The Board agreed that such a subcommittee would serve a good purpose, and it will soon be functioning.

There is some thought in the Medical Service organization that more liberal policies toward payment of claims by physicians, a situation in which this Committee certainly has played a part, could reduce too much the financial resources of the Plan. As you have just heard from Mr. Baird, almost $1,000,000 more was paid out this year to Participating Physicians by Medical Service, but the amount allotted to reserves was substantially less than last year. However, other factors, such as wider participation by more physicians, the inclusion of dermatologists in the program, and also, more recently, the podiatrists and oral surgeons, and, in general, the popularity of the office care program, undoubtedly are greater factors.

Last year in my closing remarks I recommended that space in the D. C. MEDICAL ANNALS be given for free discussion and exchange of ideas on Medical Service by Participating Physicians.

(*Continued on page 450*)

# PUBLIC ATTITUDES TOWARD USE OF MEDICAL CARE*

GEORGE BUGBEE
*President, Health Information Foundation*

The way people use medical care very much depends on two vital factors: first their knowledge of how to use it, and second, their attitudes toward physicians, hospitals, drugs and voluntary health insurance. To investigate these factors for the health field and for the benefit of the public generally, Health Information Foundation recently initiated a major national survey of public attitudes toward medical care.

A preliminary tabulation of part of the information has already been published as "Public Attitudes Toward Prescription Costs and the Drug Industry," and this survey has since been credited with setting guidelines for establishing a public relations program now in operation as the Health News Institute.

The preliminary report seems to have contributed in two ways. First, it rather clearly showed that too much emphasis has been given to how critical the public is of drug costs. There is a substantial proportion of the public—38 per cent— who say prescription drug costs are "much too high." However when asked about rent, food costs and repairs for automobiles, television and the like, equally substantial segments of the public thought these other costs were much too high. Medical costs generally were criticized by only 26 per cent of those interviewed; in other words, these costs were much less criticized than the costs of food, rent and services which people buy. But drug costs and hospital costs were singled out as the elements of medical care most criticized. Doctors' fees, for example were thought to be much too high by only 16 per cent of the public.

Further, in regard to public attitudes toward costs, it was found on analysis that those who were critical were not predominantly poor or rich, farmers or city dwellers, educated or uneducated. In fact, the only correlation was that those who were critical of food costs and rent were likely to be critical of medical care costs and drugs as well. As a matter of fact, those who reported that they had used one of the newer drugs, sulfa or an antibiotic, were generally as critical as those who had not. Criticism, apparently, is not necessarily related to any particular experience, but is more often a general reaction which does not focus on medical care or drugs or experiences with them.

## Drug Manufacturer and the Public

The second major contribution of the survey is a clear indication that the public has almost no knowledge about the drug manufacturer. People neither credit the manufacturer with any contributions to medical care nor are they critical of him. Although this study was made at the height of the controversy about Salk vaccine, 56 per cent of the public could not mention the name of even one drug manufacturer. When questioned about who might have been mainly responsible for the development of new drugs, only 11 per cent mentioned manufacturers.

How much can we rely on such statistics? Are they sufficiently sound to provide the basis for programming in public relations and education by all groups in the health field? The quality of surveys, of course, varies tremendously. This study, however, is being conducted through a grant from the Foundation to the National Opinion Research Center of the University of Chicago, which is unquestionably one of the most careful and scientific public opinion sampling organizations in the country. Our study has required interviews of a scientifically drawn sample of the population from all sections of the country, so that conclusions can be projected for the American population as a whole. A second group interviewed, 500 physicians, was selected from the family doctors reported on by the public sample. The third group, 500 pharmacists, are the managers or chief pharmacists of the stores which members of the public sample patronize.

It was hoped that this interweaving of the samples will give us added information about the attitude of the public sample and of how they learned about health matters. In fact, the preliminary report on drug costs and the pharmaceutical industry was given added meaning through matching some of the attitudes of the public with opinions by physicians and pharmacists on the same subject.

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* Presented at the 44th Annual Meeting of the American Drug Manufacturers Association at White Sulphur Springs, West Virginia, May 1, 1956.

When I tell you that each interview, regardless of the group, took an average of 2 hours, you will understand that we have a tremendous amount of data to be coded and classified for machine tabulations. The analysis is a matter of extensive work with International Business Machines and the cross-tabulating of various facts. For example, the public sample is divided and subdivided by education, age, place of residence, and, in fact, by the answer to almost any question and then cross-analyzed by replies to other inquiries. This is very time-consuming, yet the analysis of the findings is far from solely the mechanical process I describe. Very expert research workers at the National Opinion Research Center are now studying these statistics and moving toward interpretation.

The survey had as an immediate objective the development of all information possible that will provide guidelines for public relations. We expect a series of reports—a final study for the pharmaceutical industry, another for medicine, hospitals, dentistry, and voluntary health insurance. These reports should serve for the groups mentioned much as the preliminary report on the pharmaceutical industry has served to set guidelines for its public relations program. And, in fact, the Health News Institute will undoubtedly be interested in reports on all segments of the health field.

## Public Use of Medical Care Facilities

A more long-range objective of this national study is to determine the degree to which the public is wisely using medical care. You will recall that a primary objective of Health Information Foundation is the dissemination of facts to assist the public in taking advantage of the remarkable advances of medical science. Without any question, this survey will give us additional information on which to base public education programs. It is too early to draw any conclusion in regard to this aspect of the survey and, of course, no simple answers will come from the study. However, I am confident that much guidance will come, not only to the Foundation, but to all groups concerned with improving medical care.

Because this second objective is so important, I want to give you some indication of the interesting information coming to light.

One major finding which turns up consistently is the fact that large segments of the population are suffering from complaints and illnesses which could be greatly ameliorated by medical care, and they are suffering from these conditions in many cases needlessly, simply because, for one reason or another, they do not seek or receive the medical care which is available to them. In a sense, the progress of medicine has far outrun the public's willingness to take advantage of it. Doctors cannot make full use of their greater understanding of disease if people do not consult them promptly.

The vast amount of undiagnosed and unattended illness which must exist in the country is documented in a survey conducted by the National Opinion Research Center, in coöperation with the Commission for Chronic Illness, in Hunterdon County, New Jersey. Lengthy and detailed personal interviews with a representative cross-section of the population of the county dealt with the medical history of each person, and provided him with lists of symptoms and chronic conditions. He was asked to report the presence of such symptoms and conditions to the interviewer. And then a sample of the individuals interviewed was given clinical examinations, and the results of these were compared with the prior reports.

The overall figures are rather impressive. The clinical examinations turned up four times as many conditions as the respondents had reported. Acually, of the confirmed pathologic conditions found in the clinical examinations, only 22 per cent (less than a fourth) had been reported by the person during the interview; 61 per cent of all the heart conditions found in the examination had not been reported in the interview; 69 per cent of the diseases of the digestive system had not been reported; 89 per cent of the diseases of the genitourinary system had not been reported. It seems clear that the patient was not aware of most of the conditions turned up by the thorough clinical examination. And it follows that the encouragement of annual medical checkups on the part of the public would result in the detection of a vast number of pathologic conditions which are now going undiagnosed and untreated.

Not only is there a large amount of undiagnosed illness but a great many people don't even get as much medical care as they and their families think they should have. In an earlier study of family medical costs, sponsored by the Foundation and conducted by NORC, for example, 27 per cent of all families reported that someone in the family had failed, during the last year, to obtain medical care which had been recommended by a physician or was thought necessary by another member of the family. Fewer than half of these, incidentally, mentioned cost as a reason for their failure to get that care. In our current study of public attitudes toward health and medical care, 41 per cent of the population admitted to the interviewer that they could take better care of their health than they do. When a cross-section of practicing physicians were asked for their opinion on this matter, a full 80 per cent asserted that the public was not taking the best possible care of its health, and two-thirds of these criticized the public for their reluctance to see a doctor.

What these survey results show over and over again is that only a portion of the public is reaping the full benefits of modern medicine. A vast amount of illness is never brought to the attention of doctors and is consequently undiagnosed. A vast amount of recognized illness is not being properly treated. Moreover, those who are disinclined to see a doctor likewise do not take advantage of other health services or benefits of medical science. Of those people who spent no money at all on doctor bills in the course of a year, for example, a full two-thirds spent no money on drugs or medicines either. In this regard it is interesting to note that the current attitude survey shows 47 per cent of the population do not remember ever purchasing any of the new drugs, even such common ones as sulfa and penicillin. It would appear that almost half the people in this country have had no personal experience at all with modern pharmaceuticals.

In view of the concern for the public relations of the drug industry brought about by this same survey, which showed widespread ignorance of the role of the pharmaceutical manufacturer, it should perhaps be recalled that satisfied customers provide the best public relations. One patient who attributes his recovery to the action of a drug is worth a great deal in promoting the public relations of the industry. Particularly is this true among the 40 per cent of the population who have only a grade school education, who are not regularly exposed to printed information materials, and who are thus difficult to reach through any information campaign. Analysis of survey results show, for example, that among this group those who have purchased new drugs and were satisfied with their experience are significantly more favorable to the drug manufacturers than are those who lack any experience with the drugs.

## WHY PEOPLE DON'T "SEE" THEIR DOCTORS

It seems clear, then, that anything the drug industry can do to encourage the wide and proper use of available medical care, including physicians' services, hospitalization, voluntary health insurance coverage, and dentistry, is bound to have favorable effects on the industry itself. But what can the drug industry, or anybody else for that matter, do about the situation? Why do not people, in their own self-interest, take better care of their health than they do? Why do they not routinely visit their doctors for a general checkup? Why do they not avail themselves of the many and effective medical services and facilities that are open to them?

These are difficult and complicated questions, of course, and naturally I do not have the answers for them. It is a major purpose of the survey research which the Foundation has been sponsoring to investigate, and thus to provide guidance, on just such matters. The facts are not yet entirely known, and even when they will be the proper course of action may not be clear or certain. Yet already some of the dimensions of the problem are being staked out.

*Economics.* A decade or two ago, many of us thought that it was simply a matter of economics. We believed that when people don't get proper medical or hospital care, it is either because there aren't enough doctors or hospitals in the area, or because they can't afford to pay. Thus, if facilities were increased and if it were made easier for people to pay, they would get the care. But we know now that while this may be a partial answer to the problem, it is a long way from the whole truth. There are in the United States a number of private prepaid medical care groups which furnish comprehensive services to subscribers; and always, within these groups, there is a large minority of subscribers who do not use the services, even though they are paid for. I alluded earlier to the fact that fewer than half of those who failed to get the medical care which their doctors or families thought was needed explained their failure in terms of the cost of the care. If any further evidence is needed, it can be shown that throughout all income groups, ranging from the very poorest to the wealthiest, there is always a sizable proportion of families who receive little or no medical care.

*Lack of information.* There was another time when we thought it was all a matter of information. People didn't see their doctor regularly, or ignored their symptoms, simply because they didn't know any better. If you point out the proper procedure to them, and show them the advantages of preventive checkups and prompt treatment, they will do their part. But again, while this may be a partial answer, it is far from complete. The results of these surveys show pretty clearly that, by and large, the public is already rather well informed on health matters. Almost everyone has a fairly accurate idea of what he ought to do to maintain his health and to cure his illness. People know very well the dangers of smoking too much, eating or drinking too much, not getting enough sleep, fresh air, exercise and the rest of it. They know they should see their doctor promptly if they have aches or pains or unusual symptoms. Eighty per cent of the people (a very high proportion) say that everyone should get a general medical checkup every year, even if he feels fine and has no symptoms. But in general, people fail to act on their own knowledge. Our surveys show, for instance, that while 80 per cent endorse the idea of an annual checkup, only 29 per cent even claim to get one every year or two.

*Fear.* The doctors we have interviewed tend to stress fear as an important factor which keeps people from getting proper medical care. Over half of them selected from a list of 12 statements, "The doctor might find something really wrong with them," as one of the most frequent reasons people put off going to a doctor. People themselves are much less likely to admit to this. Only 10 per cent of the public chose, from the same list of 12, that particular statement as a reason they ever put off seeing a doctor. Whether the doctors overemphasize fear as a deterrent to medical care, or whether people are reluctant to admit this as a reason, cannot readily be determined at this point. Probably the truth lies somewhere between. When we ask people why other people put off seeing a doctor, the proportion who mention fear of diagnosis rises from 10 per cent to 27 per cent. Yet, fear may well be just as potent a factor in driving some people to medical care as it is in deterring others from applying for that care.

*Reluctance to "bother" the doctor.* Besides fear, the doctors and the public seem to differ on the importance of one other possible deterrent to the use of medical care. Among the 12 reasons for putting off a visit to the doctor shown to both groups was the statement, "I (or they) don't like to bother the doctor unless it's necessary." Among the public, this was the one reason most frequently selected; 41 per cent said they had put off seeing a doctor because they didn't like to bother him for something that might not be important. But among the doctors, only 23 per cent thought this was a frequent deterrent to the public. Again, we do not know whether the public is rationalizing its own reluctance to visit a doctor by putting the onus on the physician, or whether the doctors are disinclined to admit any part which they themselves might have in the situation. Yet it seems clear that most doctors do not particularly welcome patients with vague, trivial or no complaints, and that most people are understandably reluctant to "bother" the doctor unless their need is pressing.

*Negligence.* An extremely frequent deterrent, recognized by doctors and public alike, is sheer negligence. People are just too busy to see a doctor, or they don't get around to it. Undoubtedly this accounts for a large part of the undiagnosed or untreated illness in the country, and it is a difficult problem to overcome. It would be to the advantage of the whole health team to make it as easy and as convenient as possible for everyone to get a routine physical checkup every year, and it is good to see many labor and industry groups, voluntary health agencies and others trying hard to do just that.

## PHYSICIAN—KEY PERSON IN HEALTH PICTURE

Our surveys indicate that a key person in the whole health picture is the practicing physician. People are in touch with their doctors. The majority of the population see a doctor at least every 2 years, and usually oftener. Ninety-six per cent of the people who have a personal doctor (and that includes the large majority of the public) like their doctor; 99 per cent regard him as very capable; 98 per cent say he is highly intelligent. He is in a strategic position to influence their behavior. There is some evidence, however, that doctors in general do not take full advantage of the prestige they enjoy with the public and of the influence they can bring to bear on people's health practices. For example: If the present 29 per cent of the public who say they get a routine checkup every year or two could be boosted to 50 or 60 per cent of the public, the impact on the Nation's health—and on its health resources—would be tremendous. Doctors generally agree on the importance of such checkups as a preventive measure. Only 13 per cent of those we interviewed said a general physical examination is unnecessary unless the patient has some complaint. Yet fewer than half of these doctors said they make any point of recommending regular checkups to their patients.

HONORED WITH "DISTINGUISHED ACHIEVEMENT" AWARDS

Dr. Thomas S. Lee (center), founder and Past President of the Washington Heart Association and dean of American cardiologists, holds the medallion which he has just received at the annual meeting of the Association, June 24. He was named permanent Honorary President of the Association.

Looking equally pleased at similar awards are Mr. Kenneth Birgfeld (left) and Mr. Nate Haseltine, medical reporter for *The Washington Post and Times-Herald*. Mr. Birgfeld, Assistant Vice President of the American Security and Trust Company, is Treasurer of the Association and has served on nearly all its committees. Mr. Haseltine was cited for his excellent coverage of cardiovascular news and for the prestige he brought to the Association through winning the Blakeslee Award for 1956.

We believe that our Opinion and Attitude Survey, which seems already to have contributed valuable information in planning a public relations program for the health field, will also give us information and guidance on how the public can be encouraged to take better advantage of modern medical care. Further, I think it will clearly show that while lack of money has most often been cited as the main deterrent to the public's use of medical care, many other factors are equally important, and solving the money problem alone will not settle the difficulty by any means.

The Foundation, through various projects, is, of course, doing everything possible to strengthen and extend voluntary health insurance, and I believe has made real contributions toward encouraging insurance agencies to greater enrollment effort and to broadening their benefits in the fashion we see in policies with more comprehensive benefits, the fastest growing type of voluntary health insurance. Such insurance helps remove one major deterrent to adequate use of medical services by the public.

The Survey of Opinions and Attitudes, on the other hand, may be even more constructive in results. It may well set the stage for public education on a number of fronts which will lead more individuals to seek medical care in time for it to be of benefit to them. That, too, is a primary objective of Health Information Foundation and an integral part of its program to help bring more of the benefits of modern medical care to the American people.

# On the Lighter Side

It is almost bowling time again, and 107 bowling-minded physicians and dentists are eagerly anticipating September 1957 and the opening of the new 1957–58 season of the D. C. Medical-Dental Bowling League.

The bowling activities of the new season will be centered in the Bethesda Bowling Alleys on Old Georgetown Road in Bethesda, Maryland—just a stone's throw from the intersection of Wisconsin Avenue and the East-West Highway. The alleys are fast, spacious, and clean. They are air-conditioned. There are foul lines for the sticklers and automotic pin-setters that work for the bowler without capers, caprice, or cussedness. Parking is ample and free in the rear of the building. The starting time will be 9:15 p.m. every Friday night.

If any doctor or dentist living in the Bethesda, Chevy Chase, Silver Spring or Wheaton area would like to participate in this year's bowling competition and pleasures, get in touch with the President of the League, Dr. Frank Bacon (Na. 8-0263 or Wo. 6-1554), or the Vice President of the League, Dr. Harold Hawfield (Ex. 3-0343 or Ov. 4-5441), or the Secretary of the League, Mr. James Carter, at Ol. 6-8043, and offer your services. There is no charge! If you have a group of compatible fellows and would like to form a bowling team of your very own, offer your services. The more teams in the League the more fun to bowling. Come on out and give your muscles a treat by bowling in the Medical-Dental League every week.

The final standings of the 1956–57 bowling season are shown in the next column.

| Place | Team | HG | HS | Won | Lost | Pin-fall |
|---|---|---|---|---|---|---|
| 1 | Doctors | 581 | 1597 | 67 | 29 | 44,543 |
| 2 | Casualty | 566 | 1586 | 58 | 38 | 47,798 |
| 3 | Sibley #2 | 568 | 1557 | 56 | 40 | 47,124 |
| 4 | Prince Georges | 558 | 1611 | 56 | 40 | 46,943 |
| 5 | Sibley #1 | 575 | 1595 | 55 | 41 | 48,084 |
| 6 | Children's | 614 | 1649 | 52 | 44 | 49,264 |
| 7 | Columbia | 568 | 1584 | 52 | 44 | 47,073 |
| 8 | Suburban | 574 | 1605 | 51 | 45 | 48,007 |
| 9 | Alpha | 519 | 1488 | 47 | 49 | 44,404 |
| 10 | Emergency | 570 | 1545 | 44 | 52 | 45,921 |
| 11 | George Washington | 558 | 1597 | 43 | 53 | 46,024 |
| 12 | Beta | 522 | 1460 | 43 | 53 | 43,328 |
| 13 | Providence | 541 | 1446 | 38 | 58 | 45,080 |
| 14 | Garfield | 547 | 1488 | 28 | 68 | 32,241 |

The individual bowling records were outstanding for a group of amateur bowlers. Those rolling the high sets were as follows: Dr. Blaine Eig—404, Dr. Robert Levine—402, Mr. Paul Duffy—401, Dr. Charles Hageage—400, Dr. Frederick Musser—396, Dr. George Ball—376, Mr. Frank Baiers—381, Dr. Harold Hawfield—368, Dr. Clyde Reeves—367, Dr. William Cushard—362, Dr. George Resta—361, Dr. Alvin Kay—358, Dr. Gordon MacDonald—358 Dr. Millard Ottman—357, Dr. Andrew Betz—357, Dr. Francis Richardson—356, Mr. Kenneth Clark—356, Dr. W. Robert Perkins—356, Dr. Clifton Gruver—353, Dr. Allen Lloyd—352, Mr. T. K. Twigg—352, Dr. Ambrose Cook—352, Dr. J. Phelps Hand—352, Dr. S. Paul Porton—351, Dr. Frank Bacon—351, and Dr. Thomas Pekin—350.

The following bowlers labored and brought forth at least one high game of 130 or over. Those who felt their bowling pains and liked it were: Dr. Charles Hageage—172, Dr. Robert Levine—156, Mr. Paul Duffy—156, Dr. Frank Bacon—155, Dr. Frederick Musser—151, Dr. Blaine Eig—150, Dr. Gerald Steinberg—149, Mr. Frank Baiers—148, Dr. Andrew Betz—142, Dr. Paul Porton—142, Dr. Gordon MacDonald—142, Dr. Clyde Reeves—140, Mr. T. K. Twigg—140, Dr. George McLain—139, Mr. Kenneth Clark—138, Dr. Henry Canton—137, Dr. Willis Morse—137, Dr. W. Robert Perkins—137, Dr. George Resta—137, Dr. Millard Ottman—137, Dr. Al J. B. Connolly—137, Dr. Phelps Hand—136, Dr. Van Kinsbergen—136, Dr. Francis Richardson—135, Dr. William Cushard—135, Dr. Alvin Kay—135, Dr. Harold Hawfield—135, Dr. Parker Dorman—135, Dr. John D'Angelo—134, Dr. George Ball—134, Dr. Alan Crain—132, Dr. P. Paul Andrews—131, Dr. Israel Kessler—131, Dr. Ray Brown—131, Dr. John Finnegan—130, Dr. Ambrose Cook—130, Dr. Hamilton Dorman—130, and Dr. James Greeves—130.

Strikes in duckpin bowling require uncanny accurate rolling. The ball must hit in the 1—2 pocket on the Brooklyn side or the 1—3 pocket on the conventional side. Occasionally, one will get a lucky strike due to flybacks or wood with a lot of action. The following bowlers were good enough to get 40 or more strikes during the 96 game season: Mr. Paul Duffy, 65 strikes in 96 games, Dr. Alvin Kay, 52 in 93 games; Dr. Frederick Musser, 52 in 73 games; Dr. George Resta, 42 in 93 games; Mr. Frank Baiers, 42 in 86 games; Dr. Andrew Betz, 41 in 90 games; Dr. Clyde Reeves, 41 in 90 games; and Dr. Blaine Eig, 40 in 81 games.

Getting spares takes quite a bit of doing also. In order to sweep the pins off the alley with the second ball, a bowler must have accuracy and nerves of steel. If you tighten up you will miss the spare, in all probability; if you relax and concentrate on what you are doing, you will find your name among the following list of relaxed bowlers who have spared at least 170 times: Mr. Paul Duffy, 240 times in 96 games; Mr. Frank Baiers, 209 in 86 games; Dr. Robert Levine, 191 in 75 games; Dr. Alvin Kay, 189 in 93 games; Mr. Kenneth Clark, 186 in 93 games; Dr. George Resta, 184 in 93 games; Dr. Van Kinsbergen, 170 in 96 games; Dr. Blaine Eig, 170 in 81 games; Dr. Charles Hageage, 170 in 84 games; Dr. George Ball, 170 in 89 games; and Dr. Andrew Betz, 170 in 90 games.

You as a new bowler want to join the League but you are afraid that your average is not high enough. Let me reassure you, fella, that the D. C. Medical-Dental Bowling League is an average-bowler League. Let us take a look at the record. There are only 30 physicians and dentists who bowl 100 or better; but there are 60 bowlers who average in the 90's. Twelve League bowlers average in the 80's; 4 in the 70's, and 1 who averaged 68. Now, that does not sound as though the League is out of your class, bowling-wise, does it? Then come on and join up for the exciting new 1957–58 season just ahead!

J. EARL KADAN, M.D.

# THE PHYSICIAN'S RESPONSIBILITY UNDER THE SOCIAL SECURITY DISABILITY PROVISIONS

VICTOR SADD

*District Manager, Bureau of Old-age and Survivors Insurance, Social Security Administration, United States Department of Health, Education, and Welfare*

The Social Security law as enacted in 1935 provided only one kind of protection—protection against loss of earnings resulting from retirement. In 1939 benefits were provided for the dependents of retired workers and for the survivors of workers who died. But it was not until 1954 that any provision was made for the protection of workers against another important economic hazard—the loss of earnings which occurs when the family breadwinner becomes totally disabled for work. This 1954 legislation provided a way of "freezing" a worker's Social Security account so that years when he is unable to work because of lasting and total disability will not be counted against him in figuring the benefits due him when he reaches 65, or the benefits due his family in case of his death. There was no provision for the payment of any cash disability payments. Such a provision was added in 1956, when Congress provided for the payment of disability insurance benefits to disabled workers between the ages of 50 and 65 and for the payment of disabled child's benefits to the disabled adult children of insured workers who are retired or have died.

To qualify for disability insurance benefits, or to have his Social Security record frozen, a worker must have Social Security credit for at least 5 years' work in the 10 years before the beginning of his disability, and at least 1½ years of this work must have been in the 3 years just before he became disabled.

But not all disabled people who have been in work covered by Social Security for the required length of time are eligible to receive disability insurance benefits or to have their Social Security records frozen. To be eligible under either provision, a worker must have been disabled for 6 months or more at the time he applies. In addition, there must be medical evidence showing that he has a physical or mental impairment so severe that it prevents him from doing any gainful work, and that this disability is expected to continue indefinitely or end in his death. There is only one exception to the requirement that an individual be totally disabled for work, and this exception is made only in the case of persons applying to have their Social Security records frozen. An individual who is totally blind, as that term is defined in the law (central visual acuity of 5/200 or less in the better eye with the use of a correcting lens) is considered disabled for the purpose of having his Social Security record frozen. To be found eligible for cash disability insurance benefits, even the totally blind person must establish that he is unable to engage in substantial gainful activity.

The fact that an individual may be receiving disability payments for "total disability" from another Government agency, from a private insurance company, or under a company disability retirement system does not necessarily mean that he will be considered disabled under the specific provisions of the Social Security law.

A major objective of the disability program is to restore the handicapped to competitive capacity so that they will become self-supporting. This emphasis on rehabilitation is evidenced by the provision in the law requiring prompt referral of disabled applicants to state vocational rehabilitation agencies for possible rehabilitation services. If a disabled worker who is otherwise entitled to disability insurance benefits is offered rehabilitation services as a result of such a referral and refuses them, his disability insurance benefits will be withheld.

Briefly, this is how typical applications for a determination of disability are handled. The disabled individual has his initial dealing with the local Social Security Administration district office. He receives information as to his rights and obligations, and is given assistance in filing an application and necesary proofs.

It is the applicant's responsibility to furnish basic medical evidence concerning his disability. The medical evidence needed to establish the nature and severity of his disability, the date it began, and its prognosis comes from the physician who has treated him and who knows his case, or the hospital or institution in which the applicant has been confined. Those of you who have already completed the medical report form for the disability "freeze" program know that it is designed to minimize the reporting burden on you. You are not asked to certify that your patient is or is not permanently or totally disabled. All you are asked to report is a brief history of your patient's impairment and to relate the clinical facts as you found them during treatment or examination of your patient. The medical report form is returned by the physician or institution to the Social Security office or to the state agency to avoid disclosure to the applicant or patient and to protect the doctor-patient relationship.

Determinations of disability are made by state agencies with whom the Secretary of Health, Education, and Welfare has entered into agreements with respect to the making of such determinations for individuals in the state. The right to a determination of whether a disability does or does not exist is a Federal right, although the determination is made by a state agency. Congress intended that it be made under standards and procedures that are reasonably uniform and that will afford all applicants equal treatment wherever they reside. Guides for evaluating disability have been developed in consultation with state representatives and with the advice and assistance of a National Medical Advisory Committee, headed by Dr. J. Duffy Hancock of Louisville, Kentucky.

These guides are intended to serve as descriptions of the level of severity of impairments that justify a finding of "disability." They describe anatomic damage, functional loss, physical and mental disorders and other impairments in clinical terms that connote great severity. These guides are not applied mechanically. The presumptions that flow from them may be refuted by evidence that shows the individual actually did or could work despite his impairment, as when he has special vocational experience or skills. On the other hand, an individual's condition might fall somewhat short of the prescribed level of severity of any one condition, but he might have multiple impairments that, in combination, may approximate in effect the severity of a described impairment. Such cases are also allowable. Impairments that are partially disabling or are amenable to safe and acceptable treatment are not allowable bases for a finding of "disability."

On the professional team in the state agency, at least one member is a doctor of medicine. In making a disability determination, the team considers not only medical evidence, but also such nonmedical factors as the individual's education, training, experience, and age.

(*Continued on page 450*)

# News and Personals

## MEETINGS

**The 22nd Annual Assembly of the International Congress of Surgeons** will convene at the Palmer House in Chicago, September 8–12, 1957. Dr. James W. Watts, President of the District Medical Society, has arranged the program for the **Section on Neurologic Surgery** and will preside at its opening session, Tuesday, September 10, at 9 a.m. Two of the speakers at the morning session are also members of the Medical Society, Dr. Jonathan M. Williams and Dr. J. Peter Murphy. Dr. Williams will present a paper on "Craniotomy without the Necessity of Cutting Hair." Dr. Murphy will discuss "Surgical Treatment of Spontaneous Intracerebral Hemorrhage."

Dr. Watts will also participate as a panelist at the afternoon session. The subject under discussion will be "Neurologic-Ophthalmologic Surgery on Retrobulbar Lesions," with Colonel George J. Hayes, of Walter Reed Army Hospital, as moderator. Dr. Murphy will serve as Secretary for the afternoon session.

Dr. Watts calls the attention of neurosurgeons to a combined orthopedic-neurologic surgery symposium on "Severe Injuries to the Low Back," which will be held on Monday, September 9.

## GENERAL NEWS

At the regular meeting of the **Executive Board of the Medical Society of the District of Columbia,** June 24, the creation of two new committees was authorized. The suggestion for a **Committee on Medical Philosophy** came from the Chairman of the Board, and, with the Board's approval, appointments to it will be made at the next meeting. Approval was given to a **Cancer Morbidity Review Committee,** proposed by the Committee on Cancer Control. The Secretary was instructed to prepare an amendment to the Society's Constitution and By-laws to provide for its establishment as a standing committee. The Board also voted to make a project application to the District of Columbia Division of the American Cancer Society for funds to operate such a Review Committee.

In a communication dated June 18, 1957, Captain E. C. Kenney, Commanding Officer of the United States Naval Hospital, informed the Secretary that following the departure of Captain Bruce L. Canaga, who had been chosen to represent the Naval Hospital as Consulting Editor to the MEDICAL ANNALS, he had selected Captain Thirl E. Jarrett to succeed him. The Board approved the selection.

Dr. Wallace M. Yater, retiring Chairman of the Board, was unanimously selected to receive the Society's Certificate for Meritorious Service at the ANNUAL SCIENTIFIC ASSEMBLY in the fall.

**Georgetown University School of Medicine** has announced the receipt of a grant of $100, 000 from the Commonwealth Fund for the improvement of medical education. The Fund has also offered the institution an additional $200,000 if a similar sum can be raised by Georgetown on a matching basis. In announcing the award, the Very Reverend Edward B. Bunn, S.J., University President, stated that the grant would be used to undertake an educational reorganization of the pre-clinical curriculum in the Medical School.

The new Deputy Superintendent and Administrative Officer at **D. C. General Hospital** is **Mr. Charles H. Beal,** formerly Associate Administrator at Lutheran Hospital of Maryland in Baltimore. He was appointed by the District Commissioners to succeed Mr. Paul E. Keen. Mr. Beal will serve as deputy to Hospital Superintendent Philip A. E. Stebbing.

**Dr. Richard H. Kosterlitz** has been appointed **Director of Medical Education** for the new **Washington Hospital Center,** according to an announcement by Dr. W. T. Brown, Administrator. Funds for this appointment were made available by the Ford Foundation's Hospital Program.

*Dr. Kosterlitz*

Dr. Kosterlitz will devote his full time to teaching, developing, and coördinating training programs for interns and residents as well as a scientific program for the attending staff.

The position of Director of Medical Education is new to most cities and hospitals. It in no way conflicts with the duties of the hospital administrator or the attending staff. Dr. Kosterlitz hopes to make the hospital a place of learning and information for the whole community. Civic groups will be invited to lectures where staff doctors will discuss subjects of general interest.

The appointee has served on the staffs of Cook County and Mt. Sinai Hospitals in Chicago. A native of Chicago, Illinois, he received his medical degree from the University of Illinois College of Medicine. He is a diplomate of the American Board of Internal Medicine. His military service included two years in the U. S. Army.

**Dr. Thomas J. Ready,** Director of Professional Services at the VA Hospital in Providence, Rhode Island, since 1956, is now **Manager of the Veterans Administration (Mt. Alto) Hospital** in Washington, D. C., filling the vacancy created by the retirement of Dr. Edwin J. Rose on June 30.

A veteran of World War II, Dr. Ready served in the Army Medical Corps from 1941 to 1946, attaining the rank of Lieutenant Colonel. He is a native Washingtonian and a graduate of Georgetown University School of Medicine (1936). After his release from the Army in 1946, he became medical examiner at the VA Regional Office in St. Petersburg, Fla. Two years later, he was appointed Chief Medical Officer at the St. Petersburg Office.

Dr. Rose was honored at a farewell ceremony at the VA Hospital, June 18. He had given 41 years to Federal service and had been in charge of Mt. Alto since September 1953.

## PERSONALS

**Dr. Paul F. Jaquet, Jr.** has been elected Chairman of the Georgetown University Hospital General Staff for 1957–58, and **Dr. Albert F. Fleury** was elected Secretary. Both are graduates of Georgetown University School of Medicine. Dr. Jaquet is Clinical Assistant Professor of Medicine and Dr. Fleury, Associate Professor of Plastic and Reconstructive Surgery.

**Dr. Sanford Leikin** has been appointed hematologist at Children's Hospital, where he will do research on leukemia. Before this appointment he was Medical Officer in Pediatrics at D. C. General Hospital. He is also Clinical Instructor in Pediatrics at George Washington University School of Medicine.

**Dr. James W. Oberman,** Associate member of the Medical Society, has been appointed Medical Director of the Outpatient Department of Children's Hospital. He is a graduate of Georgetown University School of Medicine and serves the Medical School as Instructor in Pediatrics. Dr. Oberman obtained his residency training at Children's in 1954–55 and since then has been a member of its junior attending staff.

George Washington University School of Medicine has announced the receipt of more than $27,000 in grants from the United States Public Health Service for research projects. The largest single grant, $11,040, will enable **Dr. George A. Kelser, Jr.,** Instructor in Medicine, to develop a project entitled "The Relation of Pulmonary Hemodynamics to Lung Elasticity." **Dr. Thomas M. Peery,** Professor of Pathology, will use $6,952 for research on the cardiovascular system in animals. He will study particularly the heart and blood vessels of animals dying of natural causes at the National Zoölogical Park.

## CHANGE IN NEWS POLICY

The influx over many years of highly trained and qualified members into the Medical Society has resulted in a corresponding increase of participation of members in local, national, and international medical meetings. Because of the mounting volume of such news, your Board, with some reluctance, has decided to discontinue, beginning with this issue, news of past meetings and membership participation in past meetings. Adequate space will be given to future meetings with membership participation. Personal awards and achievements and membership participation in community endeavors will be published.

Officers of smaller medical societies in the Washington Metropolitan Area will appear once a year and officers of sections of the Medical Society twice a year. The schedule of National and Regional Meetings of interest to members will continue to appear in the Advertising Section. The Calendar of Speakers to Lay Groups will be retained.

Although the space devoted to News and Personals will be smaller, an effort will be made to make it livelier and more attractive.

The Editor

Of the remaining amount, one grant of $5,865 will go to Dr. Ira R. Telford, Professor of Anatomy, for a study of "Ethanol in the Development of Neurological Anomalies," and $3,815 to Dr. William H. Crosby, Jr., to undertake a study of "A Hemolytic System in Neoplastic Diseases."

**Dr. William T. Spence,** Associate Professor of Neurosurgery, Georgetown University School of Medicine, will direct a program at the University made possible by a grant of $11,788 from the Cerebral Palsy Research and Educational Foundation. This sum will enable the Medical School to continue its 7-year study of the effect of brain lesions on endocrine functions and metabolism.

**Drs. James J. Feffer and Howard M. Payne** received their certificates of fellowship in the American College of Chest Physicians at its Convocation in New York on June 1. Dr. Feffer is on the staff of George Washington University School of Medicine as Assistant Clinical Professor of Medicine. Dr. Payne is Professor and Chief of the Division of Tuberculosis at Howard University School of Medicine.

Both physicians are active in the work of the District of Columbia Tuberculosis Association. Dr. Feffer has served as President for the past two years and is presently on the Executive Committee. Dr. Payne has retired from the Executive Committee and is now Chairman of the Research Advisory Committee.

**Dr. Verne K. Harvey,** Medical Director of the Civil Service Commission for 17 years, left the agency on June 28.

*Dr. Harvey*

Dr. Harvey came to the Commission in 1940, after serving for 7½ years as State Commissioner of Public Health of Indiana. He has been active for more than a decade in helping the physically handicapped to find useful employment. As far back as 1942, he organized a Coördinating Committee for Training, Recruitment and Placement of the Physically Handicapped for the Federal Service. His "Operation Manual for Placement of the Physically Handicapped," published that year, is still in wide use.

During World War II he established a separate unit in the Medical Division of the Civil Service Commission to give special attention to placement of the physically handicapped in Government positions. In 1954 the President's Committee on Employment of the Physically Handicapped presented him with a citation for distinguished service.

Following a three months' orientation course at the Veterans Administration (Mt. Alto) Hospital, he will become Professional Services Director at two Indianapolis VA hospitals.

A graduate of the Indiana University School of

Medicine, Dr. Harvey has been an associate member of the District Medical Society since 1941.

**Dr. Murray M. Copeland,** Professor of Oncology at Georgetown University School of Medicine, was elected to Honorary membership in the American Orthopedic Association and on June 24 received his certificate during its 70th Annual Session, held at The Homestead in Hot Springs, Virginia. Honorary memberships are reserved for physicians who have made distinguished contributions to orthopedic surgery but who are not eligible for active membership. Dr. Copeland was honored for his contributions to this field in the areas of bone tumors and bone diseases.

**Dr. I. Phillips Frohman** has been appointed by the District Commissioners to its Committee on Employment of the Physically Handicapped.

**Dr. Aris Carpousis** was recently certified by the American Board of Preventive Medicine. This certification includes the fields of aviation medicine and public health.

**Dr. James A. Gannon, Jr.,** was elected Vice President of the Cathedral Heights-Cleveland Park Citizens Association, May 21.

**Drs. Louis K. Alpert and Roy E. Albert,** of George Washington University, have been awarded funds in the amount of $28,500 from the Atomic Energy Commission to study the cancer-producing effects of radiation on rats.

**Dr. Robert H. Parrott,** physician-in-chief of Children's Hospital, has been elected a regional trustee of the National Cystic Fibrosis Research Foundation.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**The Specialties in General Practice,** 2nd edition. Edited by Russell L. Cecil, M.D., Professor of Clinical Medicine, Emeritus, Cornell University Medical College, New York City, and Howard F. Conn, M.D., Fellow, Department of Physiology, Baylor University College of Medicine and the Blue Bird Clinic, Methodist Hospital, Houston, Texas, with articles by 15 contributors. Price, $16.00. Pp. 780, with 76 figures. Philadelphia: Saunders, 1957.

**Goepp's Medical State Board Questions and Answers,** 9th edition. Harrison F. Flippin, M.D., Professor of Clinical Microbiology, The Graduate School of Medicine, The University of Pennsylvania. Price, $8.00. Pp. 569. Philadelphia: Saunders, 1957.

**Practitioners' Conferences Held at The New York Hospital-Cornell Medical Center.** Volume 6. Edited by Claude E. Forkner, M.D., F.A.C.P., Professor of Clinical Medicine, Cornell University Medical College; Attending Physician, The New York Hospital; Consultant in Medicine (Hematology), Roosevelt Hospital; Consultant in Internal Medicine, Bronx Veterans Administration Hospital. Price, $6.75. Pp. 378. New York: Appleton, 1957.

**Evaluation of the 1954 Field Trial of Poliomyelitis Vaccine.** Final Report by Thomas Francis, Jr., M.D.; John A. Napier; Robert B. Voight, B.S.; Fay M. Hemphill, Ph.D.; Herbert A. Wenner, M.D.; Robert F. Korns, M.D.; Morton Boisen, B.A.; Eva Tolchinsky; and Earl L. Diamond, M.A., Poliomyelitis Vaccine Evaluation Center, Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, Michigan, April 1957. Lithoprint. Pp. 563. New York: National Foundation for Infantile Paralysis, 1957.

**Clinical Proctology,** 2nd edition. J. Peerman Nesselrod, B.S., M.S., M.Sc. (Med.), M.D., F.A.C.S., F.A.P.S., Assistant Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Division of Proctology, Evanston Hospital, Evanston, Illinois; Diplomate, American Board of Proctology; Captain (MC), USNR. Price, $7.00 Pp. 296, with 72 figures. Philadelphia: Saunders, 1957.

**A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology,** 8th edition. Torald Sollman, M.D., Professor Emeritus of Pharmacology and Materia Medica, School of Medicine, Western Reserve University, Cleveland, Ohio. Price, $20.00. Pp. 1535. Philadelphia: Saunders, 1957.

*(Continued on page 450)*

# PRENTISS WILLSON, M.D.

## (1882–1957)

### AN APPRECIATION

Prentiss was a skillful doctor, a superb teacher, a faithful friend, and a devoted husband and father. His passing has created a void, and he will be remembered with sweet nostalgia long after most of us are forgotten. His brilliance as a student foretold his great success in his specialty, and his ability to make friends and to hold them was unique.

He was a sophomore at the Georgetown University Medical School and I was a freshman when we met in 1902. At that time the first and second year classes were taught simultaneously, so that until he graduated in 1905 we were in daily communication.

There was an emporium not far from the old Medical School on H Street which furnished free such edibles as cold cuts, cheese, crackers, bread and pickles to those who purchased a cold, amber, foamy liquid at five cents a glass. This was a mecca for medical students, who could expound their theories without fear of contradiction by professors and instructors. Those bull sessions resulted in the cementing of many a friendship. Long street-car rides together to remote hospitals, plus the sharing of other difficulties which must be faced by medical students, tended to create mutual understanding and congeniality, which persisted for these many years.

Prentiss' avocation was bridge, and I spent many hours in his company studying the intricacies of the ever-changing hands which were dealt. In 1916 he organized a group of six who agreed to meet every second Saturday at two. Except for the interruption of dinner, the play was to be continued until midnight. One of the group was a six-footer with a deep rumbling voice, who frequently criticized his partner. We referred to him as a "big bull." The group, which has since expanded to ten members, and which is still meeting regularly, is known as "The Big Bulls." Each member takes his turn to entertain and he furnishes the dinner, the tobacco, and the lemonade (?).

For many years Prentiss was among two carloads of bridge devotees who met at 5:00 a.m. at Key Bridge on the day of the final football game of the V.M.I. at Lexington, Virginia, where Dr. Jim Moser was host on his farm. After a break for breakfast on the Skyline Drive, we proceeded to Lexington and arrived there at lunch-time. The football game was duly witnessed, followed by communal singing around Moser's organ. After dinner, bridge occupied us until dawn. A brief rest and breakfast; then golf or horse shoes until luncheon. We returned to Washington in the afternoon.

The same crowd visited the Blue Ridge Rod and Gun Club on many weekends and enjoyed the scenery and the air from the vantage point of the bridge room.

Many happy evenings were spent at Prentiss' home on Albemarle Street, where his charming wife made us welcome. Prentiss Willson enjoyed his friends, and his friends enjoyed him. He was devoted to his country, his books, his profession, his family, his friends, and his bridge.

So long, old pal. When we meet in the Hereafter we hope we can cut in at your table.

James A. Gannon, M.D.

P.S. The original "Bulls" were Prentiss Willson, Brainard Warner, Frank Schultz, Ed Pickford, Arthur Barnard, and Jim Gannon.

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Dr. Prentiss Willson, whose name was synonymous with obstetrics and gynecology during his many years of practice in Washington, died, June 25, 1957 at his home in Venice, Florida, where he had lived since he retired in 1950. He was a Life member and former President of the Medical Society of the District of Columbia.

Dr. Willson was of English descent. His grandparents, Benjamin and Elizabeth Sprague Willson, emigrated from England in 1705. His father, Sidney Lewis Willson, took part in the Battle of Gettysburg, and after the Civil War settled in Fredonia, New York, where he married Lucy Fenton Staats. Dr. Willson was born to them, August 2, 1882. Three years later the family moved to Washington when his father became a Government official.

Dr. Willson was educated in the public schools of Washington and obtained his medical training at Georgetown University School of Medicine, graduating in 1905. He interned at the University Hospital the following year.

During the first World War he was commissioned major in the U. S. Army Medical Corps and was attached to the Surgeon General's Office in Washington. He had begun practice in general medicine but leaned toward obstetrics and gynecology. His interval of military duty, limited to obstetrics, determined his devotion to that specialty exclusively after he returned to civilian life.

For 27 years Dr. Willson taught obstetrics at Georgetown University, the last four, 1928 to 1932, as full Professor of Obstetrics. He was attending obstetrician at Columbia Hospital for Women from 1929 until he retired in 1950. He was also consulting obstetrician to District of Columbia General Hospital. His offices for many years were in the Farragut Medical Building.

Dr. Willson initiated the formation of a National Committee on Federal and State Contraceptive Legislation, which was successful in combating and repealing state and national laws which restricted the freedom of physicians to advise and prescribe contraceptive devices in accordance with their professional judgment. Dr. Willson considered this one of the most important achievements of his career. He continued his interest in this movement by accepting membership on the Council on Birth Control of the Planned Parenthood Federation.

With a courage of conviction in keeping with his stature, it is not surprising that he was a leader during his entire professional career. He became a member of both the District Medical Society and the old Medical Association of the District of Columbia in 1907. He was elected a member of the Medical Society's Executive Committee in 1925, and except for one year, 1928, served continuously on that committee until elevated to the presidency in 1933, remaining as chairman through his post-presidential year, 1934. During the years he also gave much of his time, energy, and sound judgment to the Society's Committee on Medical Economics, and he is recognized as one of the pioneers in such community contributions as Hospital Service Agency, Group Hospitalization, Inc., and Medical Service of the District of Columbia.

He was nominated by the Medical Society for Associate fellowship in the American Medical Association in 1949. He was a diplomate of the American Board of Obstetrics and Gynecology, and a member and Past President of the Georgetown Clinical Society, the Clinico-Pathological Society, and the Washington Gynecological Society.

The list of his contributions to the scientific literature is long and varied, indicating the wide scope of his interests.

In Washington, the Willsons made their home at 2940 Albemarle Street, N.W. Upon his retirement in 1950, they moved to Venice, Florida, where they resided in what they named, appropriately, Stork Cottage. His wife, Mrs. Edith E. Everett Willson, whom he married in 1908, survives him. Mrs. Willson made a career of her own in medical social work, paralleling the interests of her husband. The presidency of the Mother's Health Association of the District of Columbia was only one of her numerous civic activities.

There are three children: Mrs. James O'Neal, of London, England; Mrs. Barbara Willson Laskey, of Chevy Chase, Md.; and Dr. Prentiss Willson, Jr., who also practices obstetrics and gynecology at a medical clinic in San Luis Obispo, Calif. Two sisters survive, Mrs. Floyd Keck, of San Antonio, Calif., and Miss Winifred Willson, of New York. His brother, Vice Admiral Russell Willson, died in 1948 after a distinguished career. He served as Superintendent of the Naval Academy and rose to Vice Admiral, having been Chief of Staff to Admiral King in World War II.

Much of the material in this brief account of Dr. Willson's long career comes from a most appreciative biography which was prepared by Dr. Henry C. Macatee for the series, "Our Living Past Presidents," and published in the November, 1950 issue of the MEDICAL ANNALS.

26th ANNUAL SCIENTIFIC ASSEMBLY

Hotel Statler

Washington, D. C.

October 14, 15 and 16, 1957

### Congenital Malformations of Heart—Gilbert and Wedum

(*Continued from page 422*)

176. Pedersen, A., and Therkelsen, F.: Am. Heart J., 1954, **47,** 676.
177. Vineberg, A., and Gialloreto, O.: Canad. M. A. J., 1956, **74,** 719.
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179. Dorney, E. R., Fowler, N. O., and Mannix, E. P.: Am. J. Med., 1955, **18,** 150.
180. Merrill, D. L., Webster, C. A., and Samson, P. C.: J. Thoracic Surg., 1957, **33,** 311.
181. Baffes, T. G.: Surgery, 1955, **38,** 486.
182. Bruwer, A. J., and Burchell, H. B.: J.A.M.A., 1956, **162,** 1445.
183. Di Guglielmo, L., and Guttadauro, M.: Acta radiol., 1955, **44,** 121.
184. Sen, P. K., and Datey, K. K.: Brit. J. Surg., 1956, **44,** 175.
185. Meyne, N.: Arch. chir. neerl., 1955, **7,** 297.
186. Davidson, J. S.: Thorax, 1955, **10,** 348.
187. Blalock, A.: J. Thoracic Surg., 1951, **21,** 543.

### Report of Physicians' Services Committee

(*Continued from page 434*)

In the March issue of this journal there was an invitation to all of you to contribute to the success and improvement of Medical Service in this way. I hope that you will, because I believe sincerely that this would be a most healthy thing for the Plan and a start toward a much better understanding of the relationship of the Plan to the community and to the doctor.

In closing, I wish to say that it has been a privilege and source of great satisfaction to serve on this Committee. It has been a most interesting and educational experience. I want to thank the members who have served with me for their great diligence, coöperation and patience. I should like to name them: Drs. Ernest Gould, Philip Caulfield, Roland Gable, Hugo Rizzoli, Gordon Letterman, James Dryden, Carl Berg, Raymond Holden, and Benwood Hunter. Drs. William Chase, Blaine Harrell, Lawrence Rapee, and others have also served conscientiously when called upon as alternates.

Edward W. Nicklas, M.D., *Chairman*

### Social Security Disability Provisions—Sadd

(*Continued from page 442*)

As physicians, you can assist the disability program and your patient by furnishing the necessary medical reports. The evidence you furnish should be sufficient to enable a reviewing physician to make an independent diagnosis on the basis of clinical evidence supplied on the medical report. The type of medical report used is the same for the child's and for disability insurance payment purposes as for the disability "freeze." In neither case, however, is the use of the form mandatory, for the physician is free to use the method of his choice. However, the items of information listed on the form furnish the physician with a guide as to the kinds of evidence needed by the state agency to make a determination of disability. By supplying the types of clinical evidence listed on the form, the reporting physician will reduce the need for additional reports which are sometimes requested when the evidence is not complete.

### Books Received

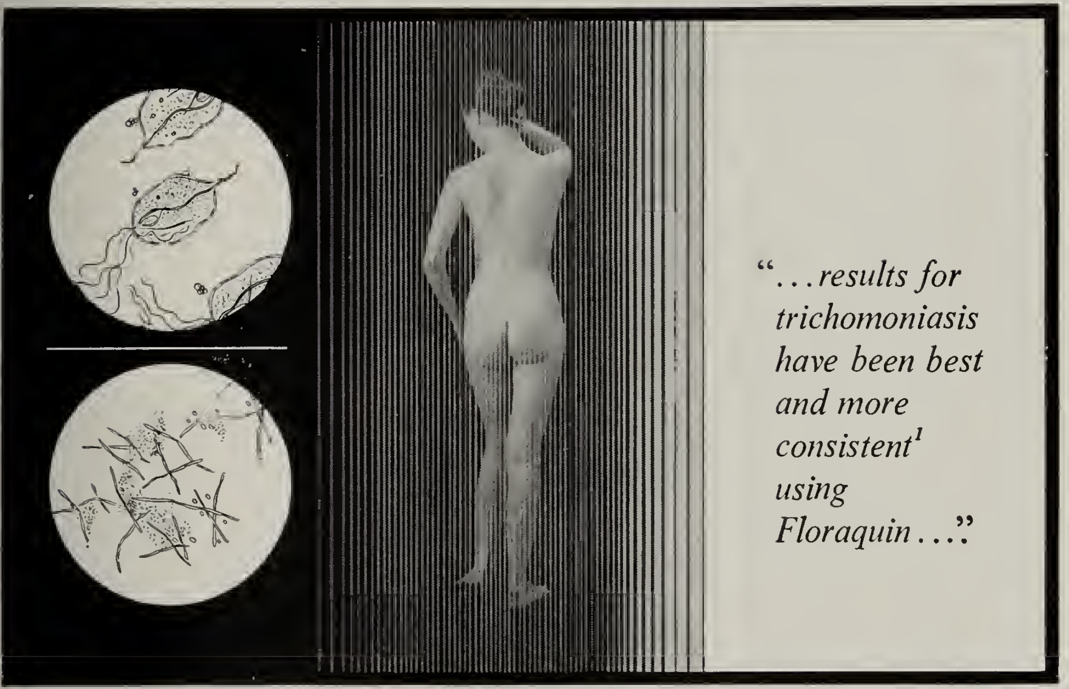
(*Continued from page 446*)

**Therapeutic Exercise for Body Alignment and Function.** Marian Williams, Ph.D., Assistant Professor of Physical Therapy, Department of Allied Medical Sciences, School of Medicine, Stanford University, and Catherine Worthingham, Ph.D., Director of Professional Education, The National Foundation for Infantile Paralysis, Inc. Exercise illustrations by Harold Black. Price, $3.50. Pp. 127. Philadelphia: Saunders, 1957.

**Ciba Foundation Colloquia on Endocrinology, Volume 10: Regulation and Mode of Action of Thyroid Hormones.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H.-W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $8.50. Pp. 311, with 114 illustrations. Boston: Little, 1957.

**Ciba Foundation Symposium on the Chemistry and Biology of Purines.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $9.00. Pp. 327, with 124 illustrations and structural formulae. Boston: Little, 1957.

EFFECTIVE, DEPENDABLE THERAPY FOR VAGINITIS


"...results for trichomoniasis have been best and more consistent[1] using Floraquin...."

Floraquin® eliminates trichomonal and mycotic infection; restores normal vaginal acidity

Leukorrhea is by far the most frequent symptom of vaginitis; trichomonads and monilia are the most common causes. Many authors have reported[2] trichomonal protozoa in the vagina of 25 per cent of obstetric and gynecologic patients. Increased use of broad spectrum antibiotics has resulted in a sharp rise in the incidence of monilial infections.

Floraquin effectively eradicates both trichomonal and monilial vaginal infections through the action of its Diodoquin® content. Floraquin also furnishes boric acid and sugar to restore the normal vaginal acidity which inhibits pathogens and favors the growth of protective Döderlein bacilli.

Pitt[1] recommends vaginal insufflation of Floraquin powder daily for three to five days, followed by acid douches and the daily insertion of Floraquin vaginal tablets throughout one or two menstrual cycles. G. D. Searle & Co., Chicago 80, Illinois. Research in the Service of Medicine.

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1. Pitt, M. B.: Leukorrhea. Causes and Management, J. M. A. Alabama 25:182 (Feb.) 1956.
2. Parker, R. T.; Jones, C. P., and Thomas, W. L.: Pruritus Vulvae, North Carolina M. J. 16:570 (Dec.) 1955.

SEARLE

# Book Reviews

**Anesthesia for Surgery of the Heart.** A Monograph in The Bannerstone Division of American Lectures in Anesthesiology. Kenneth K. Keown, M.D., F.A.C.A., Associate Professor of Anesthesiology, Hahnemann Medical College and Hospital, Philadelphia, Pennsylvania; Senior Anesthesiologist, Bailey Thoracic Clinic, Philadephia, Pennsylvania; Member of the Board of Governors of the American College of Anesthesiologists; Diplomate, American Board of Anesthesiologists, Inc.; Lecturer on Anesthesia for Intracardiac Surgery for Refresher Courses of the American Society of Anesthesiologists, Inc. Edited by John Adriani, M.D., Director, Department of Anesthesia, Charity Hospital, New Orleans, Louisiana. Price, $3.75. Pp. 109. Springfield, Ill.: Thomas, 1956.

This book is essential reading for anyone involved in the management of cardiac surgery, either from the surgical or anesthetic standpoint. Dr. Keown discusses the general problems of selection of patients, preliminary and postanesthetic management, as well as conduct of the anesthesia and complications. The section on cardiac irregularities is particularly well done and is applicable to other fields as well.

In the second half of the book Dr. Keown takes up in detail each cardiac defect, its pathophysiology, management of anesthesia for its surgical correction, and he points out the complications that may be expected and their treatment. Unfortunately, no mention is made of hypothermia or extracorporeal circulation.

Although we may differ with some of Dr. Keown's points at times, this work is the result of a vast experience with these cases, and those who have not had comparable experience will profit much from the advice of this author who is so thoroughly familiar with the pitfalls and how to avoid them.

John J. Leahy, M.D.

**Practical Diagnosis and Treatment of Liver Disease.** Carroll Moton Leevy, M.D., Director of Clinical Investigation, Director of the Outpatient Department and Attending Physician, Jersey City Medical Center, Jersey City, N. J.; Consultant in Medicine, U. S. Naval Hospital, St. Albans, N. Y. Foreword by Franklin M. Hanger, M.D., Professor of Medicine, College of Physicians and Surgeons, Columbia University, New York, N. Y. Illustrations by Felix Traugott. Price, $8.50. Pp. 336, with 84 illustrations, including 23 in full color. New York: Hoeber, 1957.

Using as his premise the superiority of a composite approach to liver disease combining clinical, biochemical and histologic study rather than emphasis on any of these facets separately, the author has compiled his information from data on 1,000 consecutive patients with liver disease seen in the Jersey City medical center.

The early chapters review for the reader basic concepts in the morphology and physiology of the liver as well as the pathogenesis of liver disease. These are presented in concise, easily understood fashion, with excellent use of diagrams. An especially useful classification of liver disease based on (a) Etiology, (b) Clinical status, (c) Biochemical studies, and (d) Histopathology is included.

Later chapters deal with such subjects as Liver Disease Due to Nutritional Deficiency and Metabolic Disturbances, Toxipathic Liver Disease, The Liver in Circulatory Disturbances, Neoplastic Disease of the Liver, and Liver Trauma.

The strong point of this book is its excellent readability. Only someone with a broad background of clinical knowledge could have discussed some of the knotty problems of liver disease with the clarity of thought and simplicity of presentation achieved in this book.

The illustrations are numerous and well chosen, and the printed page is very easy on the eye.

This is recommended reading for those wishing a concise yet comprehensive review of the subject of liver disease and treatment thereof.

W. K. Billingsley, Jr., M.D.

**The Fight for Fluoridation.** Donald R. McNeil, M.S., PhD. (in history). Price, $5.00. Pp. 241. New York: Oxford, 1957.

Flouridation is a subject of interest to everyone because of its relation to preventive medicine or, more specifically, preventive dentistry. This book deals with this controversial subject in narrative fashion and fulfills a need to present the complete story to the public.

The first part of the book deals with the natural history of mottled teeth and how the endemic studies evolved. The unraveling of the causes of mottling, its relation to dental caries, and efforts to use it as a prophylactic tool are in the tradition of classic etiologic and chemotherapeutic studies.

The latter half of the book is devoted to the problems dealing with methods of presenting the facts of fluoridation to the public and bringing about its use as a prophylactic agent. The usual opposition and mass hysteria, similar to that when vaccination was first introduced, is again repeated even though the public has been generally informed as to the facts of fluoridation. The analysis of public reaction to fluoridation raises the question as to whether the public is well enough informed to make such decisions via ballot or whether the local health authorities should control these policies.

This book serves a very useful purpose in bringing together the accummulated data in reference to a subject which it seems should not be a controversial one. The style and documentation of the material in this book are a credit to the author.

Thomas L. Hartman, M.D.

(*Continued on page 34*)

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## Book Reviews

(*Continued from page 32*)

**Principles of Urology—An Introductory Textbook to the Diseases of the Urogenital Tract.** Meredith F. Campbell, M.S., M.D., F.A.C.S. Price, $9.50. Pp. 622, with 319 illustrations. Philadelphia: Saunders, 1957.

Dr. Campbell's aim in this new book has been a dual one. He has intended it, first, as a textbook for the student in his primary encounter with urologic disease and methods of diagnosis. At the same time he has intended it as a working guide for the general practitioner. It contains a brief but sufficiently complete review of the anatomy and physiology of the genitourinary tract as well as a discussion of urologic symptomatology, with special reference to the symptoms which demand complete urologic investigation. The symptoms, clinical diagnosis, and treatment of the more common genitourinary diseases are discussed briefly, but interestingly, and adequately enough to meet the demands of everyday practice. Minor urologic office procedures, such as meatotomy and catheterization, are well explained and illustrated.

Of great interest and usefulness to the student is a chapter of urologic questions with page references to the portion of the book in which the answers may be found. The student will also appreciate the sections on history-taking, physical signs in urologic disease, urinalysis, renal function tests, and urography.

The text is well indexed, has an excellent bibliography, and has over 300 excellent reproductions of X-rays, histologic slides, diagrams, and pictures of instruments and urologic accessories. The book was written with the two-fold purpose mentioned above, which distinguishes it from Dr. Campbell's more complete "Clinical Pediatric Urology" (1951) and his 3-volume "Textbook of Urology" (1954), and in this purpose he has succeeded admirably.

Herbert A. Goldberg, M.D.

**Expectant Motherhood,** 3rd edition, revised. Nicholson J. Eastman, M.D. Price, $1.75. Pp. 198. Boston: Little, 1957.

Dr. Eastman, in this third edition, revised, has put together a full source of information for the family expecting the birth of a child. It is written with a friendly manner and easy style. It is without pedantry and it has none of the revelational "now it can be told" or "now we know all" type of medical writing which brings faulty concepts to all involved in any medical problem.

Explanations are given for the observable obstetrical phenomena and reasons are given for the author's guidance. These explanations are clear and reasonable, and if they were allowed to "soak in" the reader would be a long way toward elimination of fears engendered by gossip, superstition, and slanted medical writing. By reading the sections on miscarriage, Rh factor, breast feeding, and relief of pain, the informed will apprehend these values in Dr. Eastman's presentation.

The plan of the book is logical and for the most part sequential. Historical notes add background, humor and much interest to this excellent book which is close to complete for this time.

Barton W. Richwine, M.D.

(*Continued on page 38*)

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## Book Reviews

(*Continued from page 34*)

**The Principles and Methods of Physical Diagnosis. Correlation of Physical Signs with Certain Physiological and Pathological Changes in Disease,** 2nd edition. With a Chapter on Sounds from the Thorax: Acoustic Principles by S. Reid Warren, Jr., Sc.D. in E.E. Simon S. Leopold, M.D. Price, $9.00. Pp. 537, with 379 illustrations and 25 color plates. Philadelphia: Saunders, 1957.

The impression that physical diagnosis is a static, unchanging subject is often reflected in many of the commonly used textbooks. However, Dr. Leopold's approach to this most fundamental medical technic is refreshing in that he accepts the challenge to present this subject in a stimulating and interesting fashion.

This book is extremely thorough in all aspects of physical diagnosis, including, as well, excellent chapters on history-taking, the psychiatric survey, and the pediatric examination. The chapters dealing with the examination of the various body systems are most complete and documented with up-to-date references. There are many illustrations which demonstrate clearly the various physical signs and abnormalities which the author is discussing.

The chapters dealing with the examination of the chest and circulatory systems are particularly noteworthy. Separate chapters are devoted to diseases of the lungs and pleura and diseases of the heart and great vessels. With this format, which is used throughout the book, the abnormal findings of disease states are correlated with previously described methods of examination.

The merit of this book is not only as concerns the detail and completeness but that it is written in an easy, readable style. There are interesting historical comments and discussions relative to controversy in the explanation of certain physical signs and methods. It is also well indexed for handy reference.

This book is highly recommended for both the medical student and practicing physician.

Thomas L. Hartman, M.D.

**Rypins' Medical Licensure Examinations—Topical Summaries and Questions,** 8th edition. Walter L. Bierring, M.D. With the collaboration of a Review Panel. Price, $10.00. Pp. 964. Philadelphia: Lippincott, 1957.

This is a thoroughly pragmatic book dedicated to the important and practical purpose of helping medical school graduates pass licensure examinations, and, in general, it achieves its goal quite well. The authors presuppose that their readers were once well acquainted with the material covered, and their aims are to remind the physician of what he once knew and to bring him up-to-date in the various basic and clinical sciences.

(*Continued on page 39*)

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## Book Reviews

*(Continued from page 38)*

There is a thoughtful introduction on Medical Qualifying Examinations by Dr. Bierring. Included in this section are a few sample questions of the objective multiple-choice type now used by the National Board of Medical Examiners. One type of question which has been used for over a year is not represented, however. A serious defect of this book is that examples of multiple-choice questions are not included among the samples presented at the conclusion of each subject.

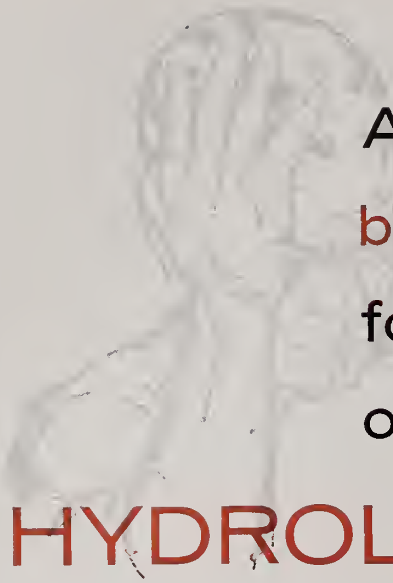
The sections on Anatomy and Physiology, written by Dr. Joseph E. Markee, are concise and authoritative. Biochemistry, by Dr. Howard W. Robinson, is too detailed in general for a review, and chemical structures are too often described in the text rather than more clearly presented as formulae. The chapter on Microbiology by Dr. Martin Frobisher covers immunology, bacteriology, mycology and parasitology. The weakest section in the volume is that on Pathology, prepared by Dr. Harry Goldblatt. Here there are inconsistencies, a few errors, and occasional omissions of some importance. Pharmacology is presented in a thoroughly business-like manner by Dr. Robert P. Walton.

The clinical sciences are all discussed well. Surgery, written by Drs. L. Kraeer Ferguson and LeRoy H. Stahlgren, is treated by body regions. Dr. Willis M. Fowler has performed the Heraklean labor of extracting the immense subject of Internal Medicine eminently well. The section on Obstetrics and Gynecology, by Dr. Robert E. L. Nesbitt includes the anatomy of the genitalia and the physiology of pregnancy and labor. The volume closes with a chapter on Psychiatry, by Dr. Howard P. Rome, which presents a glossary of psychiatric terms and describes methods of treatment. This chapter appears unnecessary and repeats some material presented under Medicine. The major defect of the clinical section is the omission of Pediatrics and Legal Medicine, both of which are included in the examinations of the National Board of Medical Examiners.

Most of the newer topics are discussed in their appropriate places. Among these are the tranquilizing drugs, the transaminase test, and the pancreatic adenoma-gastric hyperacidity syndrome. Nowhere mentioned is the carcinoid syndrome or hyaline membrane disease.

The general approach to the subject matter in this new edition of "Rypins' Medical Licensure Examinations" is good, and the aim of the book to supply a well rounded review has been accomplished. The book can be highly recommended to physicians who face state board examinations. However, it is offered with some trepidation to those who intend to take Parts I or II of the National Board examinations.

FRANK N. MILLER, M.D.



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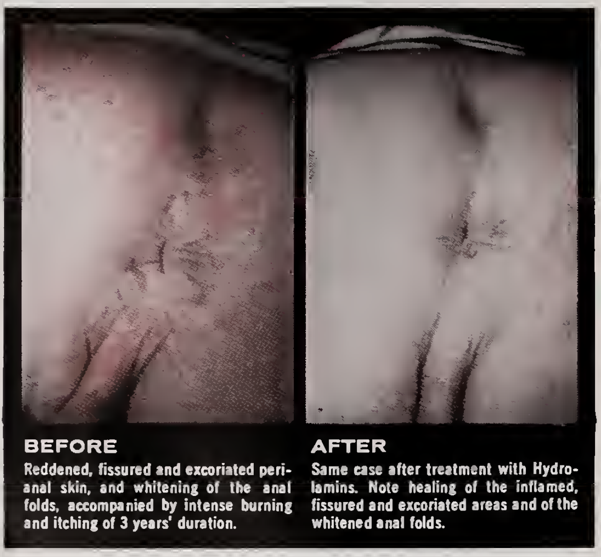

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1. Bodkin, L. G., and Ferguson, E. A., Jr.: Am. J. Digest. Dis. 18:59 (Feb.) 1951. 2. Arthur, R. P., and Shelley, W. B.: J. Invest. Derm. 25:341 (Nov.) 1955. 3. McGivney, J.: Texas J. Med. 47:770 (Nov.) 1951.

# MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI *September*, 1957 NUMBER 9

# AN EVALUATION OF TESTS OF PULMONARY AND CARDIAC FUNCTION IN RELATION TO CHEST SURGERY*†‡

K. ALBERT HARDEN, M.D., F.A.C.P.
JOHN B. JOHNSON, M.D., F.A.C.P.
HERBERT V. McKNIGHT, M.D.
WILLIAM WASHINGTON, M.D.
CHRISTINA CARR
*Washington*

DURING THE PAST several years a number of investigators have reported the effect of chest surgery upon a variety of pulmonary function tests. We felt that it would be of interest to report the results of our findings in the same area and to summarize the findings in the literature with respect to the effect of specific types of surgery in relation to specific tests of pulmonary function. This should provide information of value to clinicians and to investigators as to which tests are apt to be informative in relation to this particular problem.

Our report is based upon data obtained from patients on the chest service and in the chest clinic of Freedmen's Hospital, Washington, D. C. (tables 1 and 2). There was a total of 111 patients involved.

## METHODS

All of the pulmonary function studies were performed in the pulmonary function laboratory at Freedmen's Hospital, Washington, D. C. The cardiodynamic studies were done in the cardiovascular laboratory of the same hospital.

The maximum breathing capacity was obtained by having the patient breathe maximally for 15 seconds into a Collins respirometer with the $CO_2$ absorbent container removed. It was

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* From the Pulmonary Function and Cardiovascular Laboratories of Freedmen's Hospital and the Division of Chronic Pulmonary Disease, Department of Medicine, Howard University School of Medicine.

† Presented before the Eighth Annual Regional Meeting of the American College of Physicians in Washington, D. C., January 12, 1957.

‡ This investigation was supported in part by a research grant No. H-2675, National Heart Institute, National Institutes of Health, Public Health Service, and in part by a grant from the American Heart Association.

TABLE 1

*Characteristics of 111 Patients Receiving Chest Surgery and Pulmonary Function Tests*

| Age Range | Median Age | Sex and No. of Patients |
|---|---|---|
| 17–72 | 34 (94 patients under 50) | Female—67<br>Male —44 |

| Diagnoses and Types of Surgery | No. of Patients |
|---|---|
| Lung abscess | 3 |
| Pulmonary tuberculosis | 108 |
| Resection—2 segments or less | 5 |
| 3–8 segments | 16 |
| Pneumonectomy | 3 |
| Thoracoplasty | 87 |

TABLE 2

*Characteristics of 41 Patients Receiving Chest Surgery and More Extensive Pulmonary Function Tests*

| Age Range | Median Age | Sex and No. of Patients |
|---|---|---|
| 19–63 | 32 | Female—23<br>Male —18 |

| Diagnoses and Types of Surgery | No. of Patients |
|---|---|
| Lung abscess | 3 |
| Pulmonary tuberculosis | 38 |
| Resection—2 segments or less | 5 |
| 3–8 segments | 16 |
| Pneumonectomy | 3 |
| Thoracoplasty | 17 |

calculated in liters per minute, and the best of 3 efforts was selected.

The subdivisions of the lung were obtained in the supine position, with the use of the open circuit, oxygen dilution technic. Duplicate determinations of the functional residual capacity had to check within 200 c.c. to be acceptable. The expiratory reserve volume was obtained in the supine position by spirography. Resting ventilation and oxygen consumption were determined by collecting the expired gas in a Douglas bag for exactly 6 minutes. Gas analyses were done on the Scholander gas analyzer and the Van Slyke blood gas apparatus.

Distribution tests were based upon use of the nitrogen meter to measure expired nitrogen and alveolar nitrogen during and following 7 minutes of 100 per cent oxygen breathing.

Pulmonary artery and right heart pressures were determined in the course of cardiac catheterization, and cardiac output was determined by the direct Fick method.

## RESULTS

*Maximum Breathing Capacity.* The results are presented under specific pulmonary function tests in relation to the types of surgery performed.

In table 3 the average reduction in maximum breathing capacity in our series is compared to the results of others. Seventy-seven of the 87 patients in our series receiving thoracoplasty showed a reduction. The remaining patients showed either no change or a gain in the maximum breathing capacity. The reduction in the 7-rib group was greater than in the 4- to 6-rib group. There was no significant reduction in the group receiving resection involving 2 segments or less. In the group receiving resection involving 3 to 8 segments there was an average loss of 4 per cent in the maximum breathing capacity.

TABLE 3

*Effect of Chest Surgery upon the Maximum Breathing Capacity*

| Types of Surgery | Results of | | | |
|---|---|---|---|---|
| | Our Series | Woodruff et al[1] | Landis and Weisel[4] | Smith et al[2] |
| Thoracoplasty | | | | |
| 7 rib | −16% | −20% | | |
| 4–6 rib | −8% | | −11.3% | |
| Resection | | | | |
| 2 segments or less | No change | | −5.5% | No change |
| 3–8 segments | −4% | | | −20% |
| Pneumonectomy | −7% | | | |

$$\text{Percentage change} = \frac{\text{Preop. minus Postop.}}{\text{Preop.}} \times 100.$$

*Vital Capacity.* Patients receiving a 4- to 6-rib thoracoplasty in our series showed an average loss of 12 per cent in the vital capacity, and there was a 17 per cent loss in the 7-rib thoracoplasty group, as indicated in table 4.

TABLE 4

*Effect of Chest Surgery upon the Vital Capacity*

| Types of Surgery | Results of | | | | |
|---|---|---|---|---|---|
| | Our Series | Landis and Weisel[4] | Cournand et al[5] | Smith et al[2] | Taylor et al[3] |
| Thoracoplasty | | | | | |
| 7 rib | −17% | | −25.4% | | |
| 4–6 rib | −12% | −25.4% | | | |
| Resection | | | | | |
| 2 segments or less | −8% | −11.3% | | −12% | −20%* |
| 3–8 segments | −17% | | | −20–27% | −20%† |

* Three segments or less.

† Approximate.

The loss in vital capacity, occurring after resection of 2 segments or less, was 8 per cent; after 3 to 8 segments it was 17 per cent, and in our 3 pneumonectomy patients there was a loss of 25 per cent.

*Total Capacity and Ratio of Residual Volume to Total Capacity.* In the group of thoracoplasty patients who had lung volume determinations (table 5) there was an average loss of 16 per cent in the total capacity following a 4- to 6-rib thoracoplasty but with no significant change in the ratio of residual volume to total capacity. Those patients having 2 segments or less removed had an average loss in total capacity of 12 per cent, and those losing 3 to 8 segments had a loss of 15 per cent; in neither case was there a significant change in the ratio of residual volume to total capacity. The average loss in 3 patients who had a pneumonectomy was 21 per cent with no significant change in the ratio.

TABLE 5

*Effect of Chest Surgery upon Total Capacity and Residual Volume*

| Types of Surgery | Results of | | | | | |
|---|---|---|---|---|---|---|
| | Our Series | | Cournand et al[5] | | Smith et al[2] | |
| | TC | $\frac{RV}{TC}$ | TC | $\frac{RV}{TC}$ | TC | $\frac{RV}{TC}$ |
| Thoracoplasty—4–6 rib | −16% | No change | −25% | No change | | |
| Resection—2 segments or less | −12% | No change | | | −8% | |
| 3–8 segments | −15% | No change | | | −20–25% | |

*Ventilatory Equivalent.* It will be readily seen from table 6 that there were normal values before and after surgery for both the thoracoplasty and resection groups of patients.

TABLE 6

*Effect of Chest Surgery upon the Ventilatory Equivalent*

| Types of Surgery | No. of Patients | Before | After |
|---|---|---|---|
| Thoracoplasty. . . . . . . . . . . . | 17 | 2.5 | 2.6 |
| Resection. . . . . . . . . . . . . . . . | 24 | 2.55 | 2.50 |

*Distribution.* The results of the nitrogen washout test are shown in table 7. The 2 thoracoplasty patients who also had pulmonary emphysema showed abnormal values. The 3 resection patients had normal values.

*Cardiodynamics.* The pulmonary arterial pressure and right heart pressures were within normal limits, as shown in table 8, in the 2 patients who had these studies done.

## DISCUSSION

There are a number of factors which may influence pulmonary function independently of surgery. Among these are the age of the patient, postoperative scoliosis, pleural thickening, collapse or removal of significant amounts of normal lung tissue, improvement in performance with practice, and psychologic factors in certain tests. It is equally true that collapse and removal of nonfunctioning diseased lung tissue may not

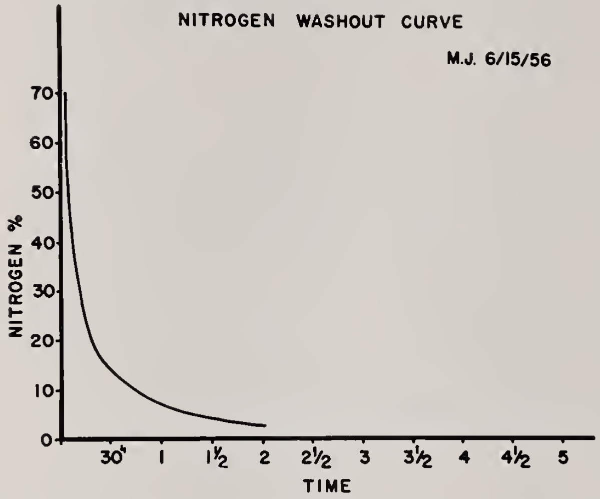
TABLE 7

*Effect of Chest Surgery upon Gas Distribution*

(Upper limit of normal 2.5%)

| Types of Surgery | Patient | After Surgery |
|---|---|---|
| Thoracoplasty | J. T. | 6% |
| Thoracoplasty | S. W. | 5% |
| Pneumonectomy | M. J. | 3% |
| Lobectomy | N. H. | 0% |
| Lobectomy | N. S. | 1% |

J. T. and S. W. had other tests compatible with pulmonary emphysema before and after surgery.



change or actually improve function as measured by even those tests which are most apt to reflect changes due to surgery.

In spite of these limitations, however, our studies and those of others indicate that certain pulmonary function tests exhibit a change in postoperative as compared to preoperative values. In addition, other tests of pulmonary function are apparently not significantly influenced by chest surgery.

### MAXIMUM BREATHING CAPACITY

This is one of the most widely used pulmonary function tests and is considered to be fairly reliable in terms of reproducibility. However, at the present time it frequently is impossible to compare absolute values from various laboratories because of the different technics employed in obtaining the values. It is possible, however, to compare values when these are given as percentage of predicted values, where the predicted values are applicable to the technic used. It is also possible to compare the percentage of change in preoperative and postoperative values, although the technics used in obtaining these values by different investigators may not be the same.

TABLE 8

*Effect of Chest Surgery upon Cardiodynamics*

| Patient A. W. | Pressure Range | Mean Pressure |
|---|---|---|
| Right auricle | | 3 |
| Right ventricle | 23/4 | 9 |
| Pulmonary artery | 26/10 | 14 |
| Pulmonary capillary | | 7 |
| Patient M. J. (Pneumonectomy) | | |
| Right auricle | | 2 |
| Right ventricle | 18/2 | 14 |
| Pulmonary artery | 19/7 | 13 |
| Pulmonary capillary | | |
| Cardiac output lit./SMBS | | 3.05 |
| Arterial saturation | | 92% |
| *Resistance:* | | |
| Pulmonary artery 182 | | |
| Normal 100–256 | | |

It should be pointed out also that there is a large standard deviation for predicted normals. This means that a reduction must be large to be significant in the individual patient. However, a statistically significant reduction of postoperative as compared to preoperative values is indicated from our results.

The manner in which thoracoplasty influences the maximum breathing capacity would be related to the amount of healthy lung tissue collapsed and the loss of integrity of the thoracic cage and its neuromuscular attachments. However, the collapse of diseased lung tissue may actually improve ventilatory capacity by removing an impediment to air flow from the process of ventilation. This accounts for the fact that studies done on this problem reveal instances in which the maximum ventilatory capacity is actually increased following surgery.[1] However, in the majority of unselected cases the tendency is to decrease, and the average change is a decrease in all large series including our own.

In resection involving 2 segments or less our series showed no significant change in the maximum breathing capacity. This was in accord with the findings of Smith, Siebens and Storey[2] and Taylor et al.[3] Although Landis and Weisel[4] found a 5.5 per cent reduction with 3 segments or less, the magnitude of this reduction is such as not to be inconsistent with the findings of other investigators. The average reduction that we found following the removal of 3 to 8 segments was relatively insignificant. The findings are compatible with the concept that the removal of diseased, nonfunctioning lung tissue should not appreciably affect the maximum breathing capacity. However, Smith and his group[2] found a significant reduction in patients with 3 to 8 segments removed. This may be related to the fact that their patients were bronchiectatic and our patients were tuberculous.

In the case of pneumonectomy, the change as a result of surgery depends so largely upon the amount of functioning lung tissue removed that one can be less definitive in terms of the effect of surgery and in terms of comparison of the results with others.

## VITAL CAPACITY

There is evidence that the vital capacity parallels the reduction in lung volume more closely than does the maximum breathing capacity. It is also affected by violation of the integrity of the thoracic cage. Cournand and Richards[5] thought that the reduction in vital capacity with thoracoplasty was related to the number of ribs removed, and this was supported by Woodruff et al.[1] The difference in results obtained by us and by Cournand and his group can be partially explained by the fact that all of our patients received anti-tuberculous antibiotics which were not available at the time of Cournand's study. We postulate that the partially collapsed lung treated by antibiotics is more patent than the untreated lung and hence is more apt to participate in vital capacity following surgery. Otherwise there is agreement between our studies and Cournand's observation that the decrease in vital capacity was related to the number of ribs removed.

The reduction in vital capacity occurring following resection is attributed by Smith et al[2] to a thoracotomy effect and they found a reduction in all resection groups. This idea was subscribed by Taylor et al,[3, 6] who found an approximate 20 per cent reduction in all groups excluding pneumonectomy. However, our results indicate a relation between the amount of lung tissue removed and the reduction in vital capacity. In this respect our results are more in accord with Landis and Weisel.[4] We all found a reduction in vital capacity; the difference was only in the degree of reduction. It should be pointed out that the vital capacity is unreliable in the prediction of functional disability.[7]

## TOTAL LUNG CAPACITY AND RATIO OF RESIDUAL VOLUME TO TOTAL CAPACITY

In our series the reduction in total capacity that occurred with thoracoplasty closely paralleled the loss in vital capacity. There was associated loss in residual volume, which meant that the ratio of residual volume to total capacity did not change significantly. This was also true of the cases studied by Cournand and also of those reported by Leiner.[8] This result was anticipated because we are dealing with a reduction in lung volumes due to reduction in size of the thoracic cage.

However, Smith and his associates[2] found that following resection there was a reduction in lung volume primarily at the expense of the vital capacity without a corresponding reduction in residual volume, and this increased the ratio of residual volume to total capacity. This could be attributed to the fact that their series was comprised of cases of bronchiectasis, many of which showed evidence of overdistention prior to surgery. This is an important area of controversy. Some surgeons routinely do space-reducing operations following resection because of the possibility of overdistention with subsequent functional disability. Recent long-term followup studies[1, 9, 10] on patients with resection tend to indicate that functional disability due to overdistention is not common in resection other than pneumonectomy. Our own unpublished data tend to bear this out. This raises a serious question as to the necessity for space-reducing surgery as a routine procedure.

### VENTILATORY EQUIVALENT

There was no significant change in the ventilatory equivalent in our patients who had this determination done before and after surgery. This was in accord with the experience of Smith and his group.[2] Inasmuch as the surgery did not involve removal or collapse of significant volumes of dead space, this was not unexpected.

### DISTRIBUTION

Luft and his associates,[11] using a special clearance equivalent for nitrogen with a normal of 13.3 in males and 13.9 in females, found abnormal values in patients with thoracoplasty and in patients with active tuberculosis. Their investigations merit further exploration. Smith et al[2] found the alveolar mixing index elevated in over one-half of their patients having bronchiectasis before resection and normal after surgery. We had 5 patients who had distribution studies after surgery. Two who had thoracoplasty had elevated values but had pulmonary emphysema as well as tuberculosis prior to surgery. In the other 3 patients with resectional surgery the values were normal following surgery. These patients did not have space-reducing surgery.

### CARDIODYNAMICS

Cardiodynamic studies were performed on 1 of our patients with a 7-rib thoracoplasty and on another with pneumonectomy. Right auricular, ventricular and pulmonary artery pressures were within normal limits. The patient with thoracoplasty had a wedge pressure within normal limits. The pulmonary artery and wedge pressure are of particular interest because of the reported occurrence of cor pulmonale following thoracoplasty. However, this is a long-term complication. Smith et al[2] in studying bronchiectatic patients found that 5 of 7 operated on had a resting pulmonary artery pressure in excess of 15 mm. However, this was related to bronchiectasis rather than surgery. On the other hand, Mannix and his group[12] found normal pulmonary arterial pressure in 2 patients who had only 5 remaining bronchopulmonary segments following surgery for bronchiectasis. Landis and Weisel[4] found normal pulmonary arterial pressure in 2 patients with pulmonary tuberculosis following surgery.

It would seem, therefore, that there is no significant, immediate effect of chest surgery per se upon cardiodynamics as measured by our current technics. However, the long-term aspect of this problem deserves further study.[10, 13]

### SUMMARY

The results of pre- and postoperative pulmonary function tests involving 111 patients have been presented. Comparison of these results with those of other investigators indicates that the tests which most consistently reflect changes following chest surgery are the maximum breathing capacity, vital capacity and total capacity. (Spirography would seem to be adequate for pre- and postoperative evaluation of patients for chest surgery in the majority of cases.) These studies suggest that space-reducing surgery should not necessarily be a routine procedure following resection. There appears to be no immediate significant effect of chest surgery upon previously normal cardiodynamics.

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*(Continued on page 516)*

# A NEW ELECTROTHERAPEUTIC DEVICE FOR TREATMENT OF SKIN LESIONS—BIO-COLD-RAY

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*Washington*

AFTER A FEW years of experience in the treatment of skin lesions with an electrotherapeutic device, I decided to carry on a series of laboratory-controlled burn-experiments with rabbits to determine its efficacy. It had been observed that skin lesions, such as burns, ulcers and poison ivy, were stimulated to healing in the human being better than any other method used, by a device patented as Bio-Cold-Ray.

Once a skin lesion is produced, provided it covers a certain amount of the body surface at a given time, the condition may not vary to a great extent, as for instance, Harkins[1] has stated that "Freezing produces local results similar to burns." It is understandable then that a therapeutic agent that may be of value in the local treatment of burns may also be effective in a severe frostbite, or, in my experience, severe poison ivy, or other skin or subcutaneous lesions that do not respond readily to healing processes. In my experience conditions which disrupt skin or subcutaneous tissue may respond to cold-ray therapy. For instance, the device has almost a selective action for sprains, such as those of the ankles, in which swelling and pain are relieved to a remarkable degree, ordinarily with 1 treatment.

One may speculate as to what may happen—whether there is nerve, tissue, blood, serum, ion or oxygenation response. These reactions are not known. Cold-ray therapy has some unknown affinity for tissues which results in stimulation of granulation and healing. Beyond that point we cannot go at present.

Burns were selected for the controlled laboratory experiments for several reasons: (1) their importance in that "the patient with severe burns is in the mind of every physician today, consciously or subconsciously"[2]; (2) the relatively high percentage of burns in catastrophic disaster in our increasing industrial life; (3) atomic energy or other enemy warfare disaster blasts (flash or flame burns caused 50 to 75 per cent of severe injuries [infrared] in Japan[2]); (4) the fact that skin injuries (including burns) respond satisfactorily to Bio-Cold-Ray therapy; and (5) because, as Medical Director of Civil Defense for the District of Columbia, I was always deeply concerned about the immediate and terminal effects of burns in atomic warfare. Anything that would prompt or speed the process of healing seemed propitious as an experimental undertaking.

Rabbits were chosen for these experiments because of their size and ease of handling from a laboratory point of view. Results will be outlined at the close of this paper.

## Bio-Cold-Ray in Treatment of Burns

I had personal experience with the Bio-Cold-Ray device in the Department of Public Health of the District of Columbia, and more particularly in one of its hospitals, the District of Columbia General Hospital, which indicated that burns, varicose ulcers, severe poison ivy, and subacute conditions from prolonged infectious processes healed more quickly when treated with this new long-wave therapy. However, it is difficult to prove with absolute certainty the beneficial results of any method experimentally on the wards of a hospital, often because of the lack of, or inability to establish, control technics.

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There always arise the questions, even though the results on the wards and clinics are satisfactory: What would have happened if nothing had been done? Would not some have healed spontaneously? These were the prime reasons for the resort to carefully controlled animal experiments, in which it was found necessary to devise a burning apparatus to adequately establish treatment and control methods.

Before describing the animal experiments I shall present briefly my experience in the treatment of skin lesions in 2 human beings.

## ILLUSTRATIVE CASES

**Case 1.** D. C. General Hospital (formerly Gallinger Municipal Hospital) file No. C 23405. The patient (a man aged 57) was admitted to the Hospital suffering from moist gangrene of the lower extremities, with numerous ulcerations on both legs below the knees and necrosis and sloughing of tissues of the toes on both feet as the result of frostbite (figure 1, A and B). Amputation of both legs was considered and seemed imperative. Local treatment consisted of the use of vaseline and gauze bandages.

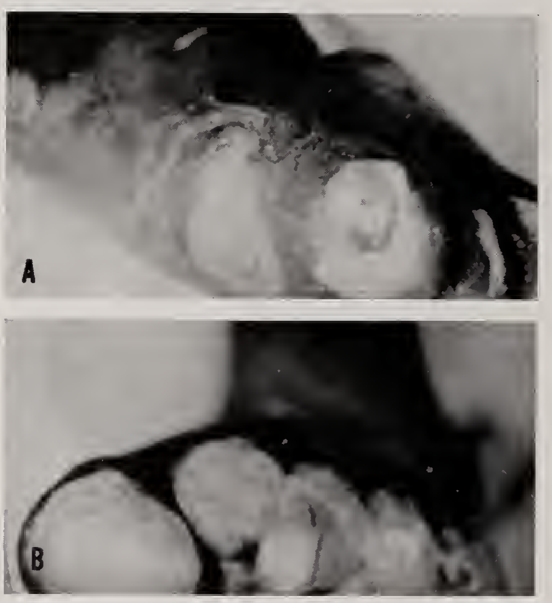

FIG. 1. (A) Right foot before treatment. (B) Left foot before treatment.

Following the fifth Bio-Cold-Ray treatment there was definite reduction of drainage and sloughing on both feet. Granulation tissue was apparent in the small toe and the fourth digit of the left foot, small toe on the right foot, and lesion on the sole of the right foot (figure 2, A and B).

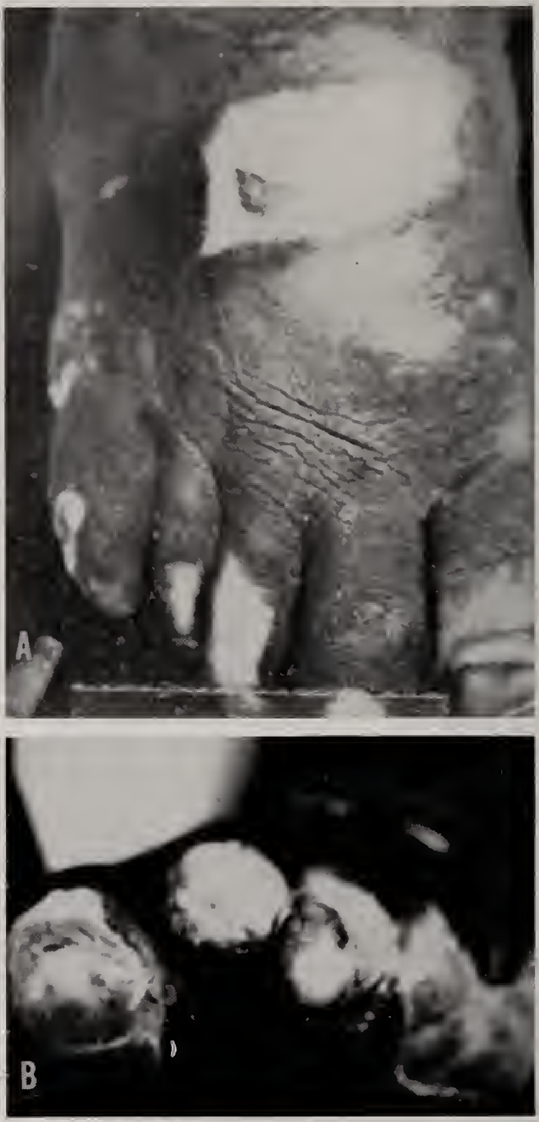

FIG. 2. (A) Right foot 16 days later. (B) Left foot 7 days later.

Treatment was continued for about 30 days, and the physician reported restoration of motor and sensory nerve responses, with continued progress to complete healing and discharge of the patient.

NOTE: A more detailed report of this case is available through the case history file at D. C. General Hospital.

The case history and photographs indicate admission prognosis as nil except for radical surgery. Subsequent therapy with Bio-Cold-Ray indicated granulation and healing as shown by the photographs. After a month the patient walked out of the hospital with all lesions completely healed, without resort to surgery.

**Case 2.** A young man critically ill with poison ivy infection was admitted to Casualty Hospital on March 10, 1949 and discharged on March 14, 1949. He had had a generalized dermatitis (poison ivy) within a year. With ordinary treatment the dermatitis disappeared for 3 weeks and then recurred. The patient was treated at Walter Reed Army Hospital for 3 weeks and later at D. C. General Hospital for 4 weeks.

At Casualty Hospital Bio-Cold-Ray treatments were instituted in addition to the use of boric acid powder and carbolated vaseline. After the first treatment with Bio-Cold-Ray the patient reported a feeling of well-being. Itching and soreness characteristic of this disease had disappeared, and his attitude was generally better and hopeful. Figure 3-A shows the face on admission and figure 3-B 2 days after his discharge from the hospital or 6 days after admission.

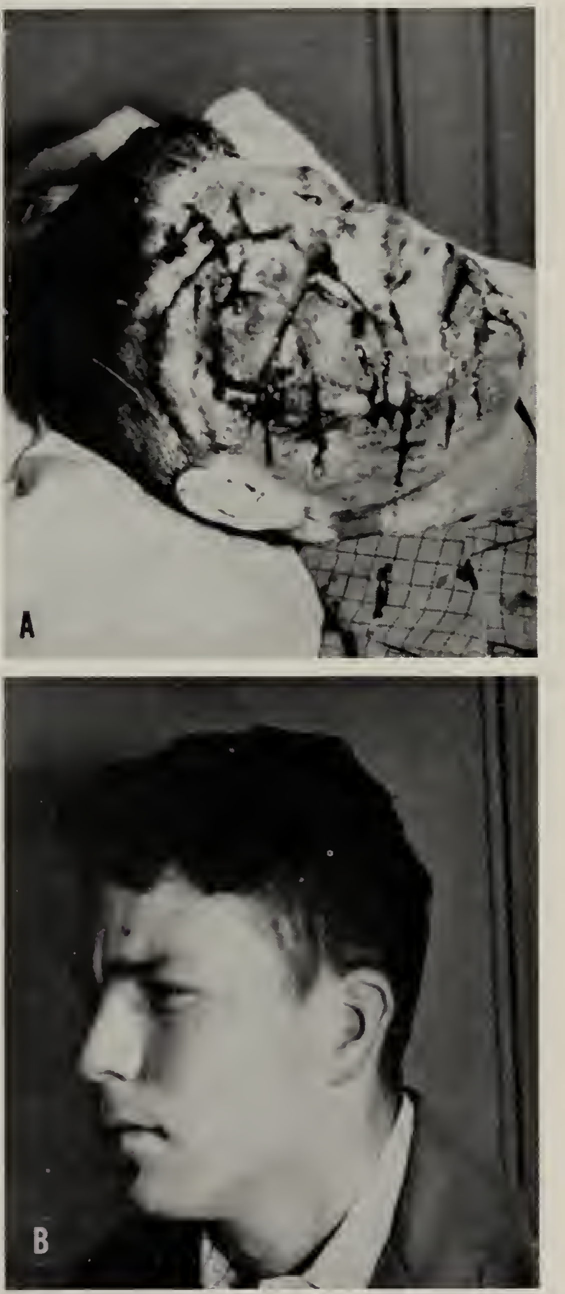

Fig. 3. (A) Condition of face on admission to hospital (poison ivy). (B) Six days later.

## What Is Bio-Cold-Ray?

It is an electrical device with certain variations that distinguish it from other electrotherapeutic devices of 50 to 75 years ago. It must be remembered that electricity was first used when it was found that it could be produced, stored, and transmitted by wires or coils for medical and therapeutic purposes and not for work as it is commonly used today. Some of the brightest researches produced by early physicists and physicians were concerned with the production of therapeutic devices for the treatment of disease. Many electrical devices today are little less than gadgets, but a review of the literature indicates that the work of Galvani, Faraday, Duchenne, and a host of others led directly to beneficial currents of electricity derived from the proper use of certain kinds of electricity now known to be associated with waves in the electromagnetic spectrum area.

The Bio-Cold-Ray instrument, according to the manufacturer, "develops the longest wavelengths used medically and is a modality which offers such selectivity as to output as to eliminate virtually all of the known contraindications and 'accepted' limitations of electrotherapy of this type."

The Pratt Institute Electrical Engineering Laboratories studied the electrical characteristics and wave forms. Extracts from the summary of that report follow.

"It is designated as safe when applied, under medical direction, to the human body.

"The generator embodies an oscillating tank circuit with spark gap as a triggering component, and it is tuned to a specific radio frequency of 420 kc. (approximately 712-meter wavelength).

"The spark gap develops a multiplicity of frequencies, commonly called 'hash.' Heretofore, this characteristic had been termed undesirable because a set, narrow frequency band could not be maintained.

"However, in this instrument, although the oscillating tank circuit is tuned to a specific fundamental frequency (420 kc.), the spark gap also develops a broad band of frequencies with harmonics and sub-harmonics.

"Oscillations so developed are 'damped' and adhere to a definite logarithmic decrement or decay. The duration of energy transfer is very short compared with the time cycle. This is expressed as 20 to 25 microseconds' duration of the 8,000 microseconds for one cycle. The difference is a 'gap' in the frequencies whereby the oscillator circuit is being 'recharged.'

"Due to this level of frequency there is no perceptible heat.

"Energy levels up to 7,800 volts are selectable over a wide range. Such selectable energies are further modified (softened) by directing the current through tubes with inert gas components.

"The output current is 69 milliamperes when under load of the body.

"Current consumed when the device is unloaded is 29 milliamperes. Variances in resistances of differing human bodies would thereby indicate a peak of 40 milliamperes through the body.

"The current passes through special type applicator tubes as it goes to the patient. These are of different configurations. A hand-piece grounds the circuit back to the instrument.

"Within the accepted meaning of the term, this device is not diathermy."

Tested by the FCC laboratories at Laurel, Maryland, this instrument, not allocated as to frequency output, has qualified within the specified radiation limits prescribed in the Rules and Regulations of the Federal Communications Commission, which also designated it as outside the definition of diathermy.

The United States Public Health Service determined it to be a "new" type of electrotherapy.

A United States patent grant was issued in 1954.

There have been no contraindications to its use as far as I have been able to ascertain. In my experience, if it has not produced beneficial results, it has in no way aggravated the condition treated.

The application of this therapy on human beings is shown in figure 4. One electrode is held in the hand of the patient while the other electrode is applied by the therapist. In this instance it brings the elbow into the electrical field.

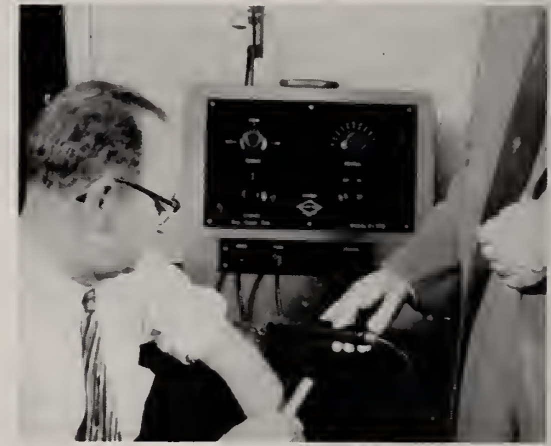

FIG. 4. Application of Bio-Cold-Ray therapy to elbow.

## TREATMENT OF RABBIT BURNS WITH BIO-COLD-RAY

Experimental animals have long been used universally to determine the value and efficacy of therapy. Burns may be readily produced, but to produce them under controlled conditions with reference to size, time interval, and temperature seemed particularly difficult, utilizing methods usually employed. Therefore, I designed an apparatus that would produce accurate control methods with reference to size, time and temperature. The size of the burning iron is 9.2 sq. in., and is shown in figure 5. An accurate description of this device will be published.

A total of 85 animals were used in the experiments, and for each burned and treated animal there was a burned and untreated animal control. Photographs were taken each day from the day of burning and thereafter until complete healing occurred.

In order to present the results as strictly comparable it is necessary to explain that no medication was given the rabbits, either locally or systemically. The burns were, therefore, strictly "dry" throughout, with no dressings placed upon the abdomen.

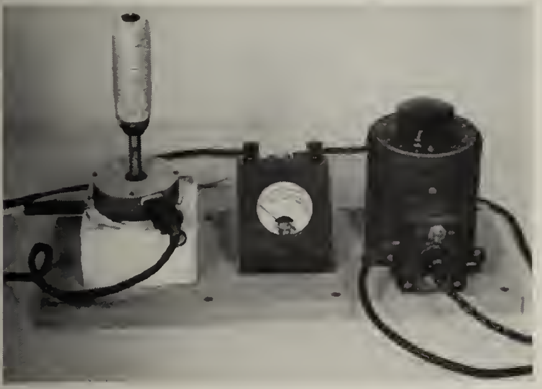

Fig. 5. Burning iron apparatus.

### BURNING OF ANIMALS

The burning iron was applied to the shaved bellies of rabbits secured or fixed to a board at a temperature of 400°C for 4 seconds. One application of the iron thus produced a burn of 9.2 sq. in. at 400°C for 4 seconds. To increase the size of the burn it was only necessary to apply the iron 2 or more times to contiguous areas at the same temperature and time interval. In this way burns of 9.2, 18.4, 27.6, 36.8 sq. in. were produced in order to vary the severity of the burn by increasing the size of the lesion.

Figure 6 shows the technic of burning with the use of an aluminum disc, 3½ in. in diameter.

### SETTING AND APPLICATION OF BIO-COLD-RAY THERAPY

In order that uniformity would be maintained throughout the experiments the machine was set at:

*First day:* (a) energy—medium, control 5, channel B for 2 minutes; (b) energy—medium, control 8, channel B for 8 minutes.

*Second day and thereafter:* energy—medium, control 8, channel A for 8 minutes.

Fig. 6. Technic of burning.

Application of the therapy is shown in figure 7. Treatment was begun after an elapse of 1 hour following burning.

From the first day the animal was burned, through the eighth day, treatment was administered every day. From the eighth day to the seventeenth day, depending upon the type of progress, treatment was administered every other day. From the seventeenth day and after, treatment was administered every 3 days.

Fig. 7. Application of Bio-Cold-Ray therapy to burn.

Color photographs of each treated animal and its control were made whenever treated. This is important to show the progress of healing. The 2 animals were photographed side by side, with the numbers of the rabbits, whether treated or control, and the interval in days after burning.

After an animal was completely healed it was so marked and its companion was photographed until and as soon as completely healed.

Figure 8 shows the technic of photographing, which bears an important relationship to permanent records for research and for other purposes.

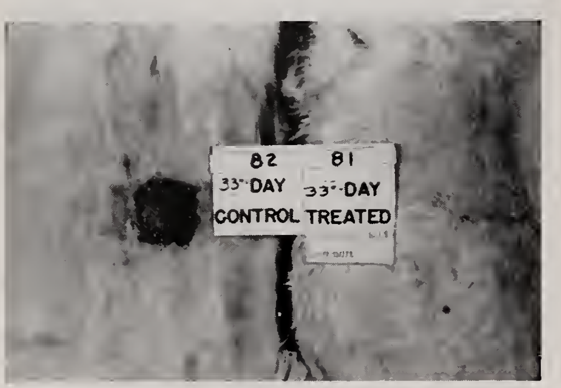

FIG. 8. Control and treated burn.

It shows a treated animal competely healed and a control not healed. The latter was photographed until completely healed and this became a part of the permanent record.

### FEEDING AND CARE OF ANIMALS

The rabbits were given a well-rounded diet of purina rabbit chow checkers (pellet form) and complete E ration, the latter consisting of ground oats, ground yellow corn, dehydrated alfalfa meal, soybean oil meal, wheat grey middlings, molasses, vitamin $B_{12}$, antibiotic supplement, riboflavin supplement, D-activated plant sterol, 1.5 calcium carbonate, 1.5 low fluorine rock phosphate, and .25 iodized salt. No variations were made in dietary content during the course of these experiments.

### EXPERIMENT V

In this group of 12 rabbits of 6 pounds and above (1, 5 pounds and 6 ounces) a most severe type of burning was employed. Four applications of the iron were employed over a skin surface of 36.8 sq. in. upon a damp towel placed upon the abdomen to produce a deep, penetrating steam burn, rather than a dry, searing burn. The latter usually was found to be limited to cutaneous and subcutaneous tissues with little penetration into abdominal viscera. Table 1, Experiment V, which is the work sheet pattern used throughout these experiments, illustrates the severity of this type of burn.

The intention in this particular experiment was to produce burns of the utmost severity commensurate with life. Four of 8 animals

TABLE 1

*Experiment Number V*

Date of burning: May 3, 1953
Date of completion of experiment: June 18, 1953
Temperature of burning iron: 400° C Time of each application: 4 sec.
Number of applications of burning iron: 4 Area of burned surface: 36.8 sq. in.

| Rabbit No. | Weight | Sex | Type of Burn | Temp. (F) before Burning | Temp. (F) after Burning | Temp. (F) after Treatment (1 hr.) | Treated | Control | Weight after 6 Days | Diarrhea (No. of Days) | Days Required to Heal | Autopsy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 5 lb 6 oz | M | Steam | 103.2 | 104 | 103 | X | | 4 lb 7 oz | | 28 | No |
| 31 | 6 lb 1 oz | M | Steam | 104.1 | 105.1 | | | X | 5 lb 6 oz | 4 | Died | X |
| 32 | 6 lb 0 oz | M | Steam | 103.4 | 104.1 | 102.1 | X | | 4 lb 8 oz | 4 | Died | X |
| 33 | 6 lb 3 oz | M | Steam | 102.6 | 102.1 | | | X | 5 lb 6 oz | 3 | 34 | No |
| 34 | 7 lb 4 oz | F | Steam | 103.1 | 103.4 | 103 | X | | 4 lb 3 oz | 3 | 29 | No |
| 35 | 7 lb 2 oz | M | Steam | 102.4 | 103.4 | | | X | 4 lb 4 oz | 6 | Died | X |
| 36 | 6 lb 3 oz | F | Steam | 103.2 | 103 | 101.4 | X | | 5 lb | 3 | 30 | No |
| 37 | 7 lb 1 oz | M | Steam | 103.4 | 104 | | | X | 3 lb 6 oz | 3 | Died | X |
| 38 | 6 lb | M | Dry | 102.1 | 103 | 102 | X | | 5 lb | 4 | 32 | No |
| 39 | 6 lb 2 oz | M | Dry | 102.4 | 103 | | | X | 5 lb 1 oz | 5 | 44 | No |
| 40 | 6 lb 4 oz | M | Dry | 103.2 | 104 | 103 | X | | 5 lb 4 oz | 6 | 31 | No |
| 41 | 6 lb 9 oz | M | Dry | 104 | 104.2 | | | X | 5 lb 9 oz | 3 | 46 | No |

steam-burned died; 3 among the control groups, or 75 per cent, and 1 among the treated, or 25 per cent, died, a total mortality of 50 per cent. All of the animals at autopsy showed gross penetration of the burn through the abdominal wall and into the abdominal cavity, and pathologic lesions upon internal organs, such as the intestines, and in 1 instance the liver. All of the animals except 1 developed severe diarrhea, varying from the third day past burning to 6 days after.

There were 4 animals dry-burned over a skin surface of 36.8 sq. in. in this group which survived. The healing time of the treated dry-burn group was a total of 63 days, whereas the total days of healing for the control group was 90 days.

There was a tremendous loss in weight among all those burned in Experiment V, practically 1.5 pounds per animal after an interval of 1 week.

No definite conclusions or deductions are to be made from Experiment V, except that there is a marked loss of weight which is generally true of all animals studied, a tremendous total mortality (50 per cent) with steam burns, and almost universal diarrhea. Even though there was a very small number of animals dry-burned, there is a difference of 27 days, or 17.6 per cent, in healing time.

## TEMPERATURE REACTIONS

Rectal temperature recordings were made prior to treatment, after burning, and 1 hour later. Temperature studies are recorded here, not because they bear any definable relationship to Bio-Cold-Ray therapy, but because it may be of value to research workers who use rabbits to learn that normal rabbits may themselves show rapid temperature changes following manipulation. As the investigation proceeded, I became suspicious of temperature recordings because treated animals nearly healed showed wide temperature reactions when tied down to the board and treated and an hour later when recorded at rest but still tied to the board. For this reason temperature recordings were made upon 2 perfectly normal rabbits.

TABLE 2

*Observation of Temperature Changes of Rabbits 9 and 10 from 10:00 a.m. through 2:00 p.m.*

| Time | Condition of Rabbit | Temp. (F) of Rabbit 9 | Temp. (F) of Rabbit 10 |
|---|---|---|---|
| 10:00 A.M. | Tied to board | 103.5 | 103. |
| 10:40 A.M. | Tied to board | 102.6 | 100.8 |
| 11:05 A.M. | Tied to board | 100.4 | 100.2 |
| 12:00 to 12:45 P.M. | Rest—not tied to board; rabbits handled by ears and legs before being tied to board for 1:00 P.M. temp. | | |
| 1:00 P.M. | Tied to board | 103 | 103.1 |
| 2:00 P.M. | Tied to board | 101.2 | 101.8 |

REMARKS: Observations show temperatures decrease after being tied to board and increase when handled by ears and legs.

It will be seen from table 2 that temperatures after an interval of 30 minutes varied from 103°+ to 100°+F, or approximately 3° difference. Another series of temperatures of 10 normal rabbits was recorded as a final check.

TABLE 3

*Rabbit Temperatures (F)*

Rabbits 1 through 10

| Time of Recording after Manipulation 3:45 P.M. | Time at Rest 4:05 P.M. |
|---|---|
| 1. 104.1° | 102.8° |
| 2. 104.0 | 103.1 |
| 3. 103.8 | 102.0 |
| 4. 103.6 | 102.2 |
| 5. 104.0 | 103.0 |
| 6. 103.8 | 103.1 |
| 7. 104.2 | 102.8 |
| 8. 104.1 | 103.2 |
| 9. 103.5 | 102.6 |
| 10. 103.0 | 100.7 |

From table 3 it is observed that temperatures of all 10 rabbits dropped after manipulation and tying to boards, often as much as 1°F or more within 20 minutes. Therefore, temperature recordings in connection with these investigations were discontinued and considered to be of doubtful value. It is not known whether other investigators have found the rabbit to be capricious with respect to variations of temperature recordings following manipulation, but such temperatures cannot be relied upon as indicating more than psychic phenomena with reference to this specific species.

A series of other experiments were done, the intent primarily being in all to determine experimentally the value of Bio-Cold-Ray as a healing or therapeutic agent. These are shown in table 4.

TABLE 4

*Analysis of Experiments with Rabbits*

| Experiment No. | No. Applications of Burning Iron | Type of Burning Application | Treated | | | Control | | | Difference in Days of Healing |
|---|---|---|---|---|---|---|---|---|---|
| | | | No. of Rabbits | Deaths | No. of Days for Healing Total | No. of Rabbits | Deaths | No. of Days for Healing Total | |
| I | 1 | Dry | 2 | 0 | 34 | 2 | 0 | 52 | 18 |
| II | 2 | Dry | 3 | 1 | 60 | 3 | 0 | 72 | 12 |
| III | 2 | Dry | 5 | 1 | 164 | 4 | 0 | 155 | 9 |
| IV | 2 | Dry | 4 | 0 | 117 | 4 | 0 | 166 | 49 |
| V | 4 | Steam & Dry | 6 | 1 | 150 | 6 | 3 | 124 | 26 |
| VI | 4 | Dry | 4 | 0 | 119 | 4 | 0 | 171 | 42 |
| VII | 5 | Dry | 5 | 0 | 165 | 5 | 0 | 195 | 30 |
| VIII | 5 | Dry | 5 | 0 | 185 | 5 | 0 | 193 | 8 |
| IX | 5 | Dry | 4 | 0 | 168 | 4 | 0 | 223 | 55 |
| X | 5 | Dry | 5 | 0 | 144 | 5 | 1 | 151 | 7 |
| Total | | | 43 | 3 | 1,306 | 42 | 4 | 1,502 | |

Treated: Average number of days for complete healing—32.7. Difference between treated and control groups—7 days.
Control: Average number of days for complete healing—39.5.
NOTE: Rabbits that died during experiment were not included in the above averages.

### ANALYSIS OF EXPERIMENTS WITH RABBITS

In table 4 43 rabbits are shown among the treated group and 42 among the untreated controls. In this series there were 7 deaths, 3 among the treated groups and 4 among the controls, leaving a total of 78 rabbits.

It will be seen that among the 43 treated animals the total time required to completely heal, in days, was 1,306 (excluding deaths), and the average time to completely heal per animal was 32.7 days. Of the 42 untreated controls, the total healing time, in days, was 1,502, or an average of 39.5 days per animal. The average healing time among the treated animals was 7 days less than the untreated, or 17.7 per cent. The actual difference in days was 196.

From a strictly medical or therapeutic point of view the difference of 196 days in favor of those animals treated, as opposed to those which had no treatment, is significant in terms of expenditures for medical care in a hospital and loss of earning capacity. Since dermal burns are percentage-wise the second highest in atomic warfare, these costs would be tremendous.

Experiment X (table 4) is interesting in that the healing interval in days is the shortest of all groups in the series. It was thought that the healing interval might be widened, and, accordingly, a group of young virile rabbits (4 to 5 pounds) were obtained and treated. It was found that the healing time difference was only 7 days between the treated and untreated animals. In this group of animals the effect was a decrease in the total number of days for healing. This was baffling and unexpected. Yet, upon more mature reflection, according to Nature's plan, animals generate and use electricity normally. It is stated that the average normal human being generates and utilizes constantly the equivalent of 60 candlelight bulbs. It seems reasonable to assume that as a generator of electricity a young and virile animal is better than one worn out or markedly incapacitated, or that when electricity is once produced the tissues and fluids of the younger body respond more readily and, therefore, more quickly. We know that skin lesions among human beings have a tendency to heal less rapidly among the aged than upon younger individuals. We have not gone into this matter exhaustively or adequately, but it opens an avenue that is well worthy of exploration.

The experiments with rabbits found to be pregnant did not unfavorably affect the course of pregnancy. Five rabbits, burned and subsequently treated with Bio-Cold-Ray, gave birth to litters of 8, 7, 8, 12 and 11 young, with no stillbirths.

## Discussion

In any form of therapy the success or failure must be gauged by its action on human patients. As stated by Karsner and Goldblatt,[3] "It is essential that the physician who studies the effect of drugs or physical therapeutic agents must not be misled by psychic effects and must base his conclusions upon clearly established facts." These authors assert that in physical therapy it is not uncommon to find that the condition to be treated is not a well-defined disease, showing no outward sign of disease with established cause, characteristic course, and that when this is true, the biologic variations in manifestation are so wide that the investigator must cover an extremely large number of cases, both treated and controls. Karsner and Goldblatt continue consideration of the evaluation of method used in physical medicine: "The evaluation of the effects of various physical agents in the treatment of certain skin diseases is not difficult, for it can be determined objectively." It is exactly for that reason that these investigations covered first only skin lesions in the human, such as a number of severe poison ivy and varicose ulcer cases, several burns, moist gangrene, and a number of other infectious skin lesions of fungus origin, in all of which healing was extremely slow before treatment with Bio-Cold-Ray. Furthermore, in order to be completely objective, a burning iron of 3½ in. diameter was designed, with a controlled temperature of 1,200°C (400°C was used in all experiments) and a time interval of 4 seconds. The only variation employed was that for the burn type and area, to show what amount of burning was commensurate with life. In some experiments 1 application of the burning iron to the skin surface was used, and in others 2 and 3 applications to different areas, but there was always a comparable control animal for every treated animal, in order that treatment and controls exactly corresponded.

A well-known scientific dictum was followed, that control and treatment methods be identical; except in these experiments where a physical medicine device was being appraised for its scientific value, there were no additional or confusing factors. All animals came from a common stock bin and had the same food. Heating and lighting were identical. No salve or ointments were applied, nor any medicine given. No dressings were applied.

Now that carefully controlled animal experiments have confirmed a difference of 1 week (7 days) in the healing time of experimentally burned rabbits, Bio-Cold-Ray being used as a physical medicine therapeutic agent, with a difference in the healing time of 17½ per cent, it appears that this therapeutic agent has a definite value in the treatment of skin lesions. This belief is corroborated in the experience previously gained in the treatment of skin lesions of human beings.

Finally, the question may be asked as to just what happens in the therapy employed. It is clearly evident that here we are concerned with activity in an electrical field. We are observing phenomena in the area of the electron and probably the molecule. In the animal there are many possibilities—too many to mention here, but there are the great fields of the atom, electrolyte and ion exchange, for example. There are the cell and tissue fluids, and sodium and potassium exchange burns, about which considerable is known.[4]

If we accept the syllogism of Crile:

> "Oxidation produces radiant energy.
> Radiant energy generates electric currents in protoplasm.
> The normal and pathological phenomena of life are manifestations of protoplasm.
> Therefore the phenomena of life must be due to radiant and electrical energy."[5]

We are treading generally in an area of very considerable importance, but it is apparent that scientific investigation at present is too slow and inadequate. Karsner and Goldblatt[3] adequately summarize the present status of physical therapy, which from my point of view is entirely propitious and timely: "For the furtherance of physical therapy it is necessary that a much larger bulk of concrete and exact information be built up than is now available. These basic facts are to be furnished chiefly by the biologist, the physiologist, the biophysicist, the chemist, and the pathologist."

The normal production and utilization of electricity by animals, including man, has been long established. Without it the normal processes of metabolism would be seriously disrupted or discontinued. The earlier medical researches of DeHaen, Nollet, Jallabert, Birch, Galvani, Faraday, Ravendish, Humboldt, Oersted, Ampére, Davy, Remak, Duchenne, Cavallo, and a host of others have proved its reviving or therapeutic effects, and they used it extensively.

Following the brilliant researches of Tesla, who stood before the American Institute of Electrical Engineers and passed currents of high voltage through his own body and heated wires to incandescence by touch of his conducting hand, a new era in electrotherapeutics began. He termed the new current "high frequency." What had he done? He transforned the heavy electric current (with amperage of force) into a discharge of electric mist, after the fashion of a man with a garden hose who may change the flow from one of force to one of mist, devoid of by-effects. In this way a new type of current, diathermy, came into existence, for it transformed electric currents into "high frequency radiation," which, because of short wavelengths, meet sufficient resistance in the body to produce heat, being of considerable advantage in some respects but in other respects producing by-effects.

Bio-Cold-Ray, to my knowledge, has never been used generally in medicine and, having been patented, it is a new type of current in the medical field. The fact that the Pratt Institute found that it was tuned to a frequency of 420 kc., a wavelength of 714 meters, indicates it is new to medical science and is of such wavelength that it may easily pass through tissues without detriment. I have found this to be exactly the case, for it has been used upon tissues so delicately arranged as the eye, without any noticeable increase in the temperature of tissues. I have never found a patient who expressed any feeling of discomfort or any indication of unsatisfactory sequelae.

## SUMMARY

1. Bio-Cold-Ray is a newly patented electrical device for treatment, tuned to a frequency of 420 kc., or approximately 714-meter wavelength.

2. Upon pathologic lesions as widely separated as burns, poison ivy, ulcers, and a number of other skin lesions among human beings it was found (1) to give relief from pain and (2) to have the property of stimulating tissues to granulation and healing with a reduction in days required for healing as further proved by controlled animal experiments.

3. Its rather general selective action upon skin lesions due to toxins, thermal burns, infections, and acute, subacute and chronic inflammations fostered the desire to produce and treat thermal burns under carefully controlled experiments, because of their frequency in disaster, medicine,

and in atomic warfare (approximately 60 per cent in the latter).

4. Accordingly, a suitable method was devised that made it possible to produce carefully controlled thermal burn lesions in rabbits.

5. For every treated animal there was designated an opposite control of comparable skin area, temperature of burning iron, and duration in seconds.

6. In the animals experimentally burned with an infrared device, the size of lesions produced varied from 9.2 to 36.8 sq. in. The latter when produced by the steam burn method carried a mortality of 50 per cent.

7. Color photographs were made from day to day of the treated animal beside its untreated control, from which permanent slides were prepared for study and other purposes that showed the number in days required for complete healing of the treated animal and its untreated control.

8. Among the animals treated with Bio-Cold-Ray the average number of days required for complete healing was 32.7 and among the controls, 39.5, a difference of 7 days.

9. From this experience with cold-ray therapy as applied to humans, relief of pain is concomitant or results shortly after therapy in a large percentage of cases. Earlier physicians have called attention to this phenomenon in the application of electrotherapy, using approved Galvanic, static, and Faradic devices.

10. As to the therapy of burns, Blalock, Harkins, Fox and others have shown that much improvement is needed. Since electrotherapy is of additional value in the healing of burns and other similar skin lesions, I definitely believe that electrical devices of proved value should be used, particularly if they are of the kind that may not produce injurious by-effects and provided they are easily manipulated by the average physician. Bio-Cold-Ray, in my experience, offers these advantages.

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# POTENTIATING EFFECT OF CHLOROTHIAZIDE (DIURIL) IN COMBINATION WITH ANTIHYPERTENSIVE AGENTS*

## Preliminary Report

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CHLOROTHIAZIDE (Diuril) has been introduced recently for clinical investigation as an oral diuretic of considerable potency. Significant loss of sodium and chloride accompanies the diuresis. Since salt loss is known to enhance the effects of antihypertensive agents, it seemed worthwhile to determine whether chlorothiazide would exert a similar potentiating effect.

Thirty-four patients with sustained hypertension were studied with chlorothiazide over periods of 1 to 4 months. The medication was added to the previous treatment regimen in a dosage of 1.5 Gm. daily orally for 3 to 5 days, followed by a maintenance dose of 1 Gm. daily. The results indicated a further significant reduction of arterial pressure. In 19 of the 22 patients on ganglionic blocking agents (usually in combination with reserpine) it was possible to reduce the dosage and in some to discontinue blocking agents entirely, substituting reserpine and hydralazine. It is significant that chlorothiazide potentiated the antihypertensive activity of reserpine, hydralazine and Veratrum or combinations of these. In most cases not only was the average blood pressure reduced but home recordings revealed less fluctuations than existed prior to chlorothiazide therapy. In addition, by providing the opportunity for reducing or eliminating ganglionic blocking agents, side-effects were reduced considerably.

In the dosages used there were no side-effects atrributable to the effects of chlorothiazide and no evidences of salt depletion. However, it must be emphasized that chlorothiazide is extremely potent and quite capable of producing serious electrolyte depletion in higher dosages. Therefore, the precaution is emphasized that elevation of dosages, particularly over the long term, above 1.0 Gm. per day is not advised. In the presence of severe renal damage perhaps even this dosage may be excessive.

These observations, although still preliminary, suggest that chlorothiazide represents a development of some importance in antihypertensive therapy. It would appear that the majority of hypertensive patients can be controlled on a combination of chlorothiazide with small dosages of reserpine (0.25 mg. per day) and hydralazine (25 to 50 mg. 4 times per day), or with similar dosages of reserpine plus sub-emetic doses of oral Veratrum, the latter titrated to the needs of the patient. Dosage adjustments of Veratrum

(*Continued on peag 516*)

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# OPERABLE CONGENITAL MALFORMATIONS OF THE HEART*

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## PART IV. SECTION 2. RARE AND UNUSUAL FORMS

### Vascular Anomalies of the Lungs

#### ABERRANT PULMONARY VESSEL FROM THE AORTA

An anomalous pulmonary vessel may arise from the lower thoracic or upper abdominal aorta or less commonly from the celiac artery and enter the lower lobe of one lung, the left being most frequently involved. Intralobular sequestration of the area of pulmonary tissue supplied by this anomalous artery is almost invariably an associated defect. The vessel is elastic in its structure and appears to be histologically similar to a systemic elastic vessel,[188] rather than, as formerly believed, to a pulmonary artery.[189] The sequestrated lung is composed of cystic tissue or a system of bronchi which do not communicate with the normal bronchial tree. Theories for this strange combination of defects have been advanced,[189, 190] and extensive pathologic studies have been made on the sequestrated portion of lung.[191]

Symptoms which are referable to the respiratory system usually begin within the first two decades of life. Productive cough and episodes of hemoptysis are the most common complaints. Intermittent attacks of fever may be associated with infection of the sequestrated lung tissue. Cyanosis is not present. Occasionally the patient is asymptomatic, and attention is drawn to the condition only by the observation of a pulmonary mass seen on routine X-ray examination.

Physical findings are usually related to the lungs, the most frequent diagnoses being pneumonia, empyema, and bronchiectasis.[191] Occasionally an anomalous vessel from the aorta entering a lower pulmonary lobe may simulate a patent ductus arteriosus because of the presence of a continuous murmur and a wide peripheral pulse pressure.[192] The murmur associated with an anomalous pulmonary vessel is usually loudest posteriorly.

X-ray examination reveals a round or triangular mass in the lower lobe having a fingerlike projection directed downward and medially.[193] The presence of long, branching vertical lines directed toward the diaphragm in the anterior-posterior view as well as the demonstration of the anomalous vessel on planography have been suggested as additional aids in the recognition of an anomalous pulmonary vessel.[194] Angiocardiography may show a large pool of dye in the involved lobe, and cardiac catheterization reveals an increased oxygen content in the pulmonary arteries, being highest on the side corresponding to the lesion.[192]

In view of its tendency to infection, surgical excision of the sequestrated pulmonary tissue is the only satisfactory method of treatment. There is, however, a very definite operative hazard. Some patients who have appeared to do well in the immediate postoperative period have succumbed to fatal hemorrhage from the anomalous artery. From a study of pathologic material it has been demonstrated that wide vascular channels are usually present between the aberrant artery and the pulmonary arteries.[191] Caution should be taken even after one vessel has been divided, in guarding against injury to other anomalous vessels which are sometimes present.[188]

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* This completes the series of four articles on this subject. The articles have appeared in consecutive issues of the Medical Annals, beginning with the May 1957 issue.

Anomalies of the bronchi and accessory pulmonary vessels arising from the descending aorta have been described in association with venous drainage of the right lung into the inferior vena cava.[195, 196] These cases were not complicated by pulmonary sequestration.

### PULMONARY ARTERIOVENOUS FISTULA

A direct communication between branches of the pulmonary arteries and veins constitutes a pulmonary arteriovenous fistula.

Due to the presence of a right-to-left shunt, cyanosis is usually present and exertional dyspnea may be a prominent feature. Cough and hemoptysis are frequent symptoms. Rupture of the fistula with fatal hemorrhage and cerebral thrombosis secondary to polycythemia are ever-present dangers. On the other hand, the condition may produce no symptoms and be first recognized on X-ray examination. The pulmonary lesion may be part of the Rendu-Osler-Weber disease or hereditary telangiectasia.[197]

The heart is usually not enlarged, and right ventricular failure does not occur because the low pressure in the pulmonary circulation causes little strain on the right ventricle.[197] The blood pressure is usually normal, as is the electrocardiogram. A murmur may be heard over the lesion which is usually continuous and has a systolic accentuation. It is best heard during inspiration and tends to fade during expiration.[197]

Radiologic examination reveals a characteristic area of communication between the afferent and efferent vessels. Fluoroscopy occasionally shows pulsations in the area of increased density with a linear band connected to the hilum.[197] Angiocardiography sharply delineates the abnormal vascular channels and accurately determines the extent of the lesion.[94, 198] It should be emphasized that this special investigation has a definite risk.[199] The dye may be pooled in a large aneurysm and interfere with the exchange of oxygen in the lungs.

Differential diagnosis is not difficult when the characteristic X-ray and angiocardiographic appearances are appreciated. In some cases, aneurysm of the pulmonary artery may be considered, but the roentgenographic mass in the latter is connected with the mediastinum and usually pulsates.[197, 200]

In localized lesions resectional surgery is curative. If there are multiple fistulas involving all lobes of the lung a total pneumonectomy is necessary.

## ANOMALIES OF THE PULMONARY ARTERIES

### ANEURYSM OF THE PULMONARY ARTERY

Aneurysms of the right or left pulmonary artery of congenital origin are frequently associated with other malformations, particularly patent ductus arteriosus and interauricular and interventricular septal defects.[200]

The age at which symptoms first appear varies considerably, but it is unusual for difficulties to arise until the second decade. The most frequent complaints are cough, exertional dyspnea, and occasional hemoptysis.[200] Cyanosis and congestive cardiac failure may develop in the late stages of the disease. On the other hand, the patient may be asymptomatic, the condition on one occasion being discovered incidentally at operation for a patent ductus arteriosus.[201]

A harsh systolic murmur in the second or third intercostal space, which may be accompanied by a thrill, is usually heard. In some cases a diastolic murmur has been present. The electrocardiogram usually reveals evidence of right ventricular hypertrophy. By radiologic examination the lesion may be visualized as a discrete, rounded shadow at the hilum. Fluoroscopy may demonstrate a peculiar expansile pulsation transmitted to the lesser pulmonary arteries.[202]

Although the murmur heard in this condition may simulate that of a patent ductus arteriosus and the clinical findings may suggest an aneurysm involving other thoracic vessels, the X-ray appearance is usually characteristic.[200] An angiocardiogram will clearly delineate this lesion.

Excision of the aneurysm may in some cases be feasible; however, ligation of the involved pulmonary artery with pneumonectomy may be necessary.

### COARCTATION OF THE PULMONARY ARTERY

A coarctation involving the bifurcation of the pulmonary artery is a rare anomaly. The area of constriction involves the first part of each branch of the pulmonary artery and is associated with fibrous bands from the ligamentum arteriosum.[203]

Cyanosis is usually severe. The condition is more serious than coarctation of the aorta because it is not possible to establish adequate collateral circulation.

The clinical findings are suggestive of a severe degree of pulmonic stenosis. Moreover, the latter has been an associated anomaly in 4 of the 5 published cases[203-205] and in 2 cases in the experience of one of us (B. G. W.).

A constriction of both branches of the pulmonary artery has been observed on angiocardiographic films. During cardiac catheterization there occurs a sudden increase in pressure on withdrawal of the tip of the catheter into the main pulmonary artery from its right or left branch.[205]

Recently 3 cases of coarctation of the pulmonary artery have been successfully treated surgically.[203]

### CONGENITAL ABSENCE OF THE RIGHT OR LEFT PULMONARY ARTERY

This condition, though rare, was first recognized at autopsy by Fraentzel[206] in 1868. It has occasionally been found incidentally at operation,[207-209] but more recently several cases of absence of a pulmonary artery have been diagnosed by angiocardiography.[210-214] It may occur as an isolated anomaly[210-214] or in association with other congenital cardiac defects.[209, 213, 215, 216] Absence of the left pulmonary artery is generally associated with tetralogy of Fallot, while absence of the right pulmonary artery is found in normal hearts or in cases in which the congenital lesion is confined to the great vessels.[217] In cases of Fallot's tetralogy associated with absence of the left pulmonary artery, an unusually high incidence of a right-sided aortic arch has been observed.[217]

When there is no associated defect the patient may be completely asymptomatic, or there may be cough, slight dyspnea, and occasionally hemoptysis.

Pertinent physical findings may include poor chest expansion and decreased breath sounds on the involved side without impairment of percussion resonance.[218] The diagnosis can be strongly suspected by examination of plain roentgenograms of the chest. On the affected side the lung is smaller with poor vascularity and decreased movement of the diaphragm. The contralateral lung is usually large, sometimes crossing the midline, and has increased radiolucency.[219] The absence of the shadow of the pulmonary artery at the hilum on the affected side may sometimes be observed. An unequivocal diagnosis is established by angiocardiography.

When there is a large bronchial artery supplying the affected lung, edema of one lobe with constant respiratory infection or hemorrhage resulting from the high systemic pressure in the bronchial arteries may necessitate removal of the lobe.[218] A further indication for surgery may be the development of congestive cardiac failure due to the large arteriovenous shunt through the bronchial arteries.[220]

### ANEURYSM OF THE DUCTUS ARTERIOSUS

A congenital aneurysm of the ductus arteriosus is rare. It has been observed at operation for ligation of a patent ductus arteriosus on at least 2 occasions.[221, 222] More commonly it arises concomitantly with recanalization after ductal ligation.[223]

The clinical findings are indistinguishable from those of a patent ductus arteriosus. Roentgenologic examination, however, may demonstrate an arched shadow in the region of the left hilum which projects into the left lung field.[224]

Surgical excision of the aneurysm together with ligation and excision of the recanalized ductus, if present, should be performed. The technic and operative hazards have been discussed in a recent publication.[223]

### CORONARY ARTERIOVENOUS FISTULA

A congenital arteriovenous communication of the coronary circulation usually involves either the right coronary artery[225, 226] or the circumflex branch of the left coronary artery.[227]

The patient may be asymptomatic and the condition incidentally discovered at autopsy.[225] More commonly there are symptoms and signs closely resembling those of patent ductus arteriosus. Moreover, this diagnosis in most instances has not been made preoperatively, the true nature of the lesion being identified at surgery.

Arteriovenous aneurysms tend gradually to increase in size and may ultimately lead to congestive cardiac failure. In 1 case an aneurysm of the coronary vessels was estimated to account for approximately half of the resting cardiac output.[227]

Cardiac catheterization will aid in the exclusion of a patent ductus arteriosus. Sampling of the blood directly from the coronary sinus will help confirm the diagnosis. Since normal coronary venous blood contains little oxygen, a saturation exceeding 30 per cent can be taken as evidence of an arteriovenous shunt into the coronary circulation.[227] Anomalous pulmonary venous drainage into the coronary sinus will present the same catheterization results. However, the other clinical findings should differentiate this lesion. A retrograde aortogram may prove helpful in demonstrating the abnormal coronary circulation.

Coronary arteriovenous fistulas are apparently well tolerated and do not as a rule shorten the normal life expectancy. Therefore, surgical intervention should only be attempted if the patient has developed intractable cardiac failure, especially since ligation of a major coronary branch may carry the risk of the subsequent development of severe myocardial ischemia. In order to obviate this complication, when a branch of the left coronary artery must be sacrificed, one of the methods for vascularization of the left ventricle may be performed at the same time.[37, 38, 228]

In a recent report[229] the left coronary artery was found to be lying free in the pericardial cavity in the proximal half of its course and communicating directly with the infundibular region of the right ventricle. A preoperative diagnosis of patent ductus arteriosus had been made. At operation the anomalous vessel was ligated and divided. The patient made an uneventful recovery, and no complications had developed when the case was reported 16 months after operation.

An unusual type of arteriovenous communication has been described in which an anomalous vessel arising from the septal branch of the left anterior descending coronary artery ran directly to the pulmonary artery.[230] This patient lived to be 76 years of age and was considered during life to have a patent ductus arteriosus because of the presence of a continuous murmur. Despite the gross dilatation and tortuosity of this aberrant vessel, there appeared to be no symptoms directly related to its presence.

### CONGENITAL ARTERIOVENOUS FISTULAS INVOLVING THE LARGE THORACIC VESSELS

Arteriovenous communications of congenital etiology involving the subclavian[231, 232] and the internal mammary vessels[233, 234] have been described occasionally.

The clinical findings in these patients closely resemble those of a patent ductus arteriosus. Certain atypical features, however, may lead one to suspect the presence of an arteriovenous aneurysm of the thoracic vessels. A definite pulsation may be palpable, and the characteristic murmur of a systemic arteriovenous fistula may be heard. It is high-pitched and continuous, extends throughout the cardiac cycle, and has a systolic accentuation.[235] Since a congenital arteriovenous aneurysm may not become manifest until adult life, if a continuous murmur first appears at this time, it would seem to be presumptive evidence against the diagnosis of patent ductus arteriosus and would tend to substantiate the presence of an arteriovenous fistula. Venous catheterization and angiocardiography will exclude the diagnosis of a patent ductus.[231]

A congenital aneurysm of the superior vena cava, which was recognized as a right upper mediastinal mass which pulsated minimally during fluoroscopy, has been successfully excised.[236] Symptoms consisted of pain along the thoracic vertebrae and increasing dyspnea.

### Ectopia Cordis

The condition in which the heart lies totally or partially outside the thoracic cage is a rare anomaly and was considered by Maude Abbott[237] as being of no clinical significance because of nonviability. Of recent years, however, this major cardiac anomaly has been successfully corrected surgically[238-240] and therefore has entered the category of operable congenital cardiac malformations.

Depending on its site, ectopia cordis is classified into 4 main types: cervical, thoracic with fissure of the sternum, abdominal with diaphragmatic defect, and thoraco-abdominal. Associated congenital cardiac lesions, such as tetralogy of Fallot and septal defects, have been frequently found. The cervical and thoracic groups carry a poor prognosis. Most instances of these types have been stillborn or have died within a few hours of birth. Cases of thoraco-abdominal ectopia cordis usually survive for a somewhat longer period, the patient of Scott[240] having been successfully repaired at 3 years of age and that of Ravitch[241] at 20 years of age. Major's case[239] was surgically corrected without complication immediately after birth. The abdominal type may be compatible with a normal life span.

Surgery of the thoraco-abdominal group consists in the repair of the defect in the diaphragm and the anterior abdominal wall with restoration of the heart and the intestines to their normal locations. Thoracic ectopia cordis may be corrected by repairing the defect in the sternum by a graft of cartilage removed from the lower ribs. This procedure has been successful in a 7-week-old infant and a 12-year-old child.[238]

### Congenital Diverticulum of the Left Ventricle

A congenital diverticulum of the left ventricle is produced by fusion of the epimyocardium with the mesenchyma of the septum transversum. When the latter descends it exerts a traction on the heart, thus initiating the formation of a diverticulum.[242]

The classical sign of a pulsating tumor under the skin of the epigastrium should lead one to suspect the condition. Survival past infancy is rare, but 1 case is recorded of a 34-year-old man,[243] and successful surgical resection has been performed in a 9-year-old boy.[242] Spontaneous rupture of the diverticulum is an ever-present danger.[244]

Angiocardiography will clearly demonstrate the diverticulum.[244]

Successful surgical resection of the diverticulum has been performed in 4 patients.[242, 244-246]

A congenital aneurysm of the left ventricle, which presented as an abnormal protuberance of the left ventricular wall on X-ray examination, has been described.[247] The condition did not cause any cardiac symptoms. However, such a lesion would appear to carry a risk of rupture and may well be surgically corrected in similar fashion to that of a diverticulum of the left ventricle.

## EBSTEIN'S DISEASE

In Ebstein's malformation the tricuspid valve is displaced downward into the right ventricle. The posterior and septal cusps arise from the right ventricular wall and the interventricular septum respectively; the anterior cusp arises from both the right ventricular wall and the annulus fibrosus. The valve is incompetent and usually appears as fibrous bands on the endocardium. An atrial septal defect is frequently present.

This condition rarely causes disability during infancy and may not be recognized until adolescence or even later. It may be compatible with many years of active adult life. The commonest symptoms are breathlessness and attacks of paroxysmal tachycardia.[248, 249] Cyanosis, which may or may not be present, is dependent on increased pressure in the right atrium with shunting of blood through the foramen ovale or an atrial septal defect into the left atrium. The presence of cyanosis is usually not evident until after infancy, although it has been observed at birth.[248, 250]

A systolic murmur is usually present over the precordium, and occasionally a soft, rumbling apical diastolic murmur may be audible. A well-marked triple rhythm at the apex is a frequent auscultatory finding.[249, 251] Because of the enlarged right atrium there is dullness to percussion on the right of the sternum. The clinical signs of tricuspid incompetence are usually absent, mainly because the large right atrium acts as a reservoir for the regurgitation from the small right ventricle.[252] In addition, in the presence of an atrial septal defect, the blood can escape into the left atrium instead of into the systemic veins. The occurrence of this anomaly in acyanotic adults with clinical findings closely resembling acquired rheumatic valvular disease has recently been emphasized.[253]

Peaked P waves and right bundle-branch block are frequently observed. The heart on radiologic examination has a characteristic globular contour, and there is usually poor vascularity of the lung fields. Fluoroscopy reveals a large right atrium with diminished movement of the right ventricle and poor pulsation of the pulmonary artery.[248, 254]

Angiocardiography and cardiac catheterization were formerly fraught with considerable danger because of the hazard of initiating cardiac arrhythmias. From more recent studies, however, these investigations seem to be relatively safe procedures if they are carried out in experienced hands.[253] A large right atrium with slow emptying of the contrast medium is seen on the angiocardiogram. Cardiac catheterization demonstrates high right atrial and normal right ventricular pressures. Coiling of the catheter in the large right atrial chamber is a characteristic sign.[249]

The conditions which may be difficult to exclude in the diagnosis are pulmonic stenosis, tricuspid atresia, and tetralogy of Fallot. The electrocardiographic signs of left axis deviation and left ventricular preponderance in tricuspid atresia should readily eliminate this diagnosis. The later onset of cyanosis, absence of squatting, and electrocardiographic evidence of right bundle-branch block with a grossly enlarged heart should favor the diagnosis of Ebstein's disease when other findings are suggestive of tetralogy of Fallot. Clinical differentiation from pulmonic stenosis may be difficult. However, the presence of conduction disturbances on electrocardiographic examination and the typical angiocardiographic appearance should differentiate Ebstein's anomaly.

Patients with Ebstein's malformation in which there is a large venous-arterial shunt through an atrial septal defect or a foramen ovale may suffer considerable disability. These patients may benefit from closure of the atrial septum. Such a procedure has provided considerable alleviation of symptoms in 1 patient.[255]

### ENDOCARDIAL FIBROELASTOSIS IN THE ADULT

Reports of congenital endocardial fibroelastosis in which symptoms have first appeared during adolescence or early adult life are exceptional.[256-258] A review of heart disease of obscure etiology covering a period of 25 years and a total autopsy series of 10,000 has recently come from the Massachusetts General Hospital.[259] Twelve cases of endocardial fibroelastosis in adults were discovered, which pathologically were indistinguishable from those occurring during infancy and childhood. These authors, therefore, proposed a congenital etiology for this group also. In the light of these studies, it would seem that congenital endocardial fibroelastosis, having a considerable time lag between birth and the onset of symptoms in adult life, may not be such a rare entity as previously considered.

The clinical findings in all cases have been striking in their similarity. Dyspnea is a prominent symptom. There is usually a sudden onset of congestive cardiac failure, and hemoptysis may occur terminally. Once symptoms develop the course is rapidly downhill.

Examination of the heart usually reveals no murmurs or thrills. Occasionally an apical systolic murmur may be heard. X-ray films demonstrate the presence of left ventricular enlargement. Evidence of conduction defects with T-wave inversion and left ventricular preponderance have been characteristic. One patient, a boy of 15 years, showed electrocardiographic resemblance to an extensive myocardial infarction.[258]

If this condition is kept in mind in cases of congestive cardiac failure of obscure nature, the diagnosis may be made during life, in which case one of the procedures for vascularization of the left ventricle[37, 38, 228] may be attempted.

It may be mentioned that the cases of endomyocardial sclerosis, including those reported from East Africa, have different histologic features from those of apparent congenital etiology. In the latter, the endocardial thickening is composed essentially of fibro-hyaline connective tissue, whereas in congenital fibroelastosis elastic tissue elements form a large component of the endocardial thickening.[260]

### TAUSSIG-BING HEART

This malformation, which was first described in detail by Taussig and Bing,[261] consists of transposition of the great vessels with the pulmonary artery overriding a high ventricular septal defect. The pulmonary trunk is large, and there is right ventricular hypertrophy.

Cyanosis and dyspnea, usually dating from birth, with poor growth and development are the most prominent symptoms.[262] Clubbing of the fingers and toes is frequently observed. The second heart sound may be loud and booming,[263] and there is often a diffuse systolic murmur heard over the precordium which may be accompanied by a thrill.

There is electrocardiographic evidence of right ventricular hypertrophy, and radiologic examination reveals a large pulmonary artery and increased pulmonary vascularity with prominence of the hilar vessels. The heart may be somewhat enlarged and have a globular contour.

Angiocardiography may establish the diagnosis by demonstrating in the left lateral view the biventricular origin of the pulmonary artery. The stream of blood from the left ventricle containing no contrast medium joins that from the right ventricle as they flow into the pulmonary artery. This has been described as characteristic.[107] The procedure, however, may be dangerous in that the injection of the dye into the superior vena cava may raise the pressure in the right side of the heart, thereby decreasing the left to right shunt and the oxygen saturation of the blood reaching the aorta.[261] Cardiac catheterization studies show a higher oxygen saturation in the pulmonary artery than in the aorta. The catheter may be passed into either the pulmonary artery or the aorta from the right ventricle, these 3 areas having the same systolic pressures.[264] There is a fall of oxygen saturation of the arterial blood after exercise.

The most important condition to differentiate from the Taussig-Bing heart is Eisenmenger's complex. In the latter, cyanosis usually develops during childhood or adolescence, and the oxygen saturation of the arterial blood rises following exercise. The characteristic X-ray appearance of complete transposition of the great vessels should distinguish this defect. In truncus arteriosus and single ventricle with transposition, cyanosis is minimal and both lesions have their own typical roentgenologic features. A definitive diagnosis of the Taussig-Bing anomaly, however, may be extremely difficult.

The same surgical procedures as have been suggested for complete transposition of the great vessels,[3, 187, 265] can be attempted in the Taussig-Bing complex. Blalock[187] has reported a better postoperative prognosis in patients with this type of transposition following the creation of an atrial septal defect. At the present time this would seem to be an excellent palliative procedure and would enable the child to be tided over until the technics for more definitive modes of correction are perfected.

## Primary Pulmonary Hypertension

Increased pulmonary artery pressure produced by obstructive lesions in the smaller pulmonary vessels and associated with a fundamentally normal heart has been designated idiopathic or primary pulmonary hypertension. The etiology of this syndrome is obscure, but sometimes the condition appears to be congenital. Pathologic studies have occasionally revealed thromboembolic or necrotizing lesions in the small pulmonary arteries.[266] In other cases the striking feature may be medial hypertrophy of the pulmonary arterioles.[266, 267] Intimal proliferation with partial or complete occlusion of the muscular arteries and arterioles may occur.[268]

Symptoms may begin shortly after birth or in late childhood or early adult life, and the sex incidence is predominately female. Breathlessness on exertion is the dominant complaint. Pain of the anginal type may be precipitated by exertion, and syncopal attacks frequently occur.[266, 268] Cyanosis may be present early and is commonly present as a terminal feature. It is usually peripheral in distribution and is due to high oxygen desaturation in the venocapillary bed as a consequence of the low cardiac output.[266] Cyanosis may also occur in the presence of a right-to-left shunt through an atrial septal defect. A history of repeated respiratory infections and cough are characteristic. Pressure on the recurrent laryngeal nerve by grossly dilated pulmonary arteries has occasionally produced paralysis of the left vocal cord.[266, 269] Hemoptysis has been rarely reported.[266, 270] Jaundice and facial pigmentation developing as a sequence of congestive cardiac failure with associated tricuspid incompetence and hepatic distention have been noted.[267] Sudden death is not uncommon.

The characteristic physical finding in all cases is accentuation of the second pulmonic sound. An early pulmonic systolic click or ejection sound has been described, with a narrowly split second sound.[267, 271] A systolic murmur is sometimes present at the apex or at the base. A diastolic murmur of functional pulmonary insufficiency is occasionally heard.[266, 268] The peripheral pulses are weak, and the blood pressure is usually low, especially in the terminal stages.

The cardinal electrocardiographic feature is marked right ventricular preponderance with peaking of the P waves. X-ray films show prominence of the pulmonary artery with right ventricular enlargement and abnormally clear peripheral lung fields.

Angiocardiography does not reveal any specific diagnostic features. Cardiac catheterization is a valuable method of excluding congenital heart anomalies associated with an intracardiac shunt. It is possible by this investigation to demonstrate a high pulmonary artery pressure associated with a normal pulmonary capillary pressure.[272] The arterial oxygen saturation is normal, and the mixed venous blood has an abnormal degree of desaturation, indicating a low cardiac output.[267] Patients with primary pulmonary hypertension tolerate special investigative procedures poorly.[273]

Polycythemia is present.

The diagnosis of primary pulmonary hypertension should be made only when all other causes for pulmonary hypertension have been excluded. Chronic lung disease is characterized by physical findings and radiologic signs relating to the respiratory system. Enlargement of the left auricle and a history of rheumatic fever usually distinguish mitral stenosis. Reversal of blood flow in a patent ductus arteriosus with resulting pulmonary hypertension in its late stages may be clinically indistinguishable from primary pulmonary hypertension. However, the diminished vascularity of the lung fields and the evidence of right ventricular hypertrophy on the electrocardiogram should serve to differentiate the latter. Likewise, a ventricular septal defect including Eisenmenger's complex can usually be excluded by radiologic examination. Cardiac catheterization may sometimes be necessary in order to arrive at the correct diagnosis.

Treatment of this condition has not been satisfactory. Antispasmodics, especially Priscoline,[270] have been used in an attempt to overcome any possible vasospasm. Anticoagulant therapy[273] has also been suggested. Possibly a combination of a careful pulmonary denervation and adequate pleurectomy might benefit these patients, since they suffer from both pulmonary hypertension and reduced pulmonary flow. When primary pulmonary hypertension is accompanied by a patent ductus arteriosus the latter may act as a safety valve in limiting the degree of pulmonary tension by reversal of flow. The ductus in such cases should not be ligated.

## Conclusion

Over the last decade progress in the field of cardiovascular surgery has been rapid. Since the development of dependable methods of cardiac bypass there still has remained the problem of accomplishing satisfactory homotransplantation of tissue. Heretofore transplanted tissue has survived for only brief periods of time, and attempts to create artificial valves by the use of both homograft material[274, 275] and autogenous tissue[276] have failed. Of interest in this respect is a recent report of the isolation in crude form of a substance enhancing tumor homograft survival in experimental studies.[277] Fundamental advances in this direction will inevitably follow and should eventually open wide the field of cardiac surgery. The future undoubtedly holds immense potentialities for reconstructive operative procedures on the heart, and it would seem that cardiac surgery will shortly encompass the most bizarre types of congenital malformations. Therefore, it becomes imperative to establish a correct diagnosis even in the most unusual forms.

Acknowledgment: The authors are indebted to Mrs. Mary Liles of the National Library of Medicine, Mrs. Thelma Robinson of the Library of the Clinical Center, National Institutes of Health, and Miss Pauline Duffield and staff of the Library of the Texas Medical Association for the many courtesies extended to them in the preparation of this series of papers.

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*(Continued on page 516)*

# 26th

# ANNUAL SCIENTIFIC ASSEMBLY

of the MEDICAL SOCIETY OF THE
DISTRICT OF COLUMBIA

STATLER HOTEL
WASHINGTON, D. C.
OCTOBER 14-15-16, 1957

# A MEETING FOR ALL PHYSICIANS

Dr. Brigulio

Now that preparations for the 26th Annual Scientific Assembly have been completed, I do not hesitate to promise those who attend one of the most stimulating meetings ever sponsored by the Medical Society of the District of Columbia. I can do so in all modesty, for many hands have made it possible. Some of their names will be found elsewhere in this section of the Medical Annals. Several others, not on committees, responded to my personal appeal. While they must remain anonymous, I wish to acknowledge my gratitude to them.

One of the unique features of this Assembly is the color television program on a large screen made possible through the generosity of The Upjohn Company. This is a "first" which will attract much attention. There are, of course, other features of equal merit.

This is an Assembly for every physician, regardless of his or her specialty. In view of this and the quality of the scientific program and exhibits, my committee is counting on the largest turnout in the Assembly's history.

Alfred Brigulio

General Chairman
Committee on Arrangements

# *26th Annual Scientific Assembly*

## WORLD MEDICINE IN REVIEW*

## SCIENTIFIC PROGRAM

All Sessions Unless Otherwise Indicated in the Presidental Ballroom, Hotel Statler

### MONDAY, OCTOBER 14—MORNING SESSION

**Herbert P. Ramsey, M.D.,** *Presiding*

Chairman, Executive Board, The Medical Society of the District of Columbia

9:45 Welcome

**James Winston Watts, M.D.**

President, The Medical Society of the District of Columbia

10:00 Keynote Address: WORLD MEDICINE

**Paul Dudley White, M.D.**

Emeritus Professor of Medicine, Harvard Medical School

11:30-12:00 Large Screen Color Television:

THE GLOBAL THREAT FROM ASIAN INFLUENZA

Dr. White

### MONDAY, OCTOBER 14—AFTERNOON SESSION

**James W. Watts, M.D.,** *Presiding*

President, The Medical Society of the District of Columbia

2:30-4:30 Panel Discussion Periods

Dr. Jeghers

Panel A: DIFFERENTIAL DIAGNOSIS OF FEVER (Presidential Ballroom)

Introduction: **Herbert P. Ramsey, M.D.**

Discussion Leader: **Harold Joseph Jeghers, M.D.**

Professor and Director, Department of Medicine, Seton Hall College of Medicine

Participants:

**Hugh Hudson Hussey, M.D.**

Professor and Director, Department of Medicine, Georgetown University School of Medicine

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* The theme of this meeting was chosen for its timeliness and the opportunity it afforded of honoring the World Medical Association.

**Norman B. McCullough, M.D.**
Chief, Laboratory of Clinical Investigation, National Institute of Allergy and Infectious Diseases

**Monroe James Romansky, M.D.**
Professor of Medicine, George Washington University School of Medicine

PANEL B: ACUTE INTESTINAL OBSTRUCTION (Pan American Room)

INTRODUCTION: **Duane C. Richtmeyer, M.D.**

DISCUSSION LEADER:

**Owen Harding Wangensteen, M.D.**
Chief, Department of Surgery, University of Minnesota School of Medicine

PARTICIPANTS:

**Robert J. Coffey, M.D.**
Professor of Surgery, Georgetown University School of Medicine

**Vincent Michael Iovine, M.D.**
Associate Clinical Professor of Surgery, George Washington University School of Medicine

**Gerald Hugh McAteer, M.D.**
Associate Professor of Surgery, Georgetown University School of Medicine

**Charles Waters Thompson, M.D.**
Associate in Medicine, George Washington University School of Medicine

## TUESDAY, OCTOBER 15—MORNING SESSION

**Alfred E. Brigulio, M.D.**, *Presiding*

General Chairman, Committee on Arrangements, 26th Annual Scientific Assembly

9:30–10:00 LARGE SCREEN COLOR TELEVISION: "HOW-TO-DO-IT" SERIES

(a) How to Treat Acute Pulmonary Edema
(b) How to Remove Foreign Bodies from the Eye
(c) How to Treat a Case of Poisoning
(d) How to Strap a Sprained Ankle

10:00–12:00 PANEL DISCUSSION PERIODS

PANEL A: GASTROINTESTINAL BLEEDING (Presidential Ballroom)

INTRODUCTION: **Alfred E. Brigulio, M.D.**

DISCUSSION LEADER:

**Leon Schiff, M.D.**
Professor of Clinical Medicine, University of Cincinnati College of Medicine

PARTICIPANTS:

**Irving Brick, M.D.**
Associate Professor of Medicine, Georgetown University School of Medicine

**William Stanley McCune, M.D.**
Associate Clinical Professor of Surgery, George Washington University School of Medicine

**Paul Ranney McCurdy, M.D.**
Instructor in Medicine, Georgetown University School of Medicine

Dr. Wangensteen

Dr. Schiff

Dr. Anderson

Dr. Dameshek

Dr. Beecher

PANEL B: FETAL AND NEONATAL DISTRESS (Pan American Room)

INTRODUCTION: **Dorothy B. Holmes, M.D.**

DISCUSSION LEADER:

**George Woodrow Anderson, M.D.**
Assistant Professor, Department of Obstetrics, Johns Hopkins University School of Medicine

PARTICIPANTS:

**Seymour Alpert, M.D.**
Associate Professor of Anesthesiology, George Washington University School of Medicine

**Frederic Gerard Burke, M.D.**
Professor of Pediatrics, Georgetown University School of Medicine

**Pete Commings, M.D.**
Assistant Professor of Obstetrics and Gynecology, Georgetown University School of Medicine

**George Maksim, M.D.**
Assistant Clinical Professor of Pediatrics, George Washington University School of Medicine

**John Augustine Washington, M.D.**
Associate Clinical Professor of Pediatrics, George Washington University School of Medicine

## TUESDAY, OCTOBER 15—AFTERNOON SESSION

**Duane C. Richtmeyer, M.D.,** *Presiding*

First Vice President, The Medical Society of the District of Columbia

2:00–4:00 PANEL DISCUSSION PERIODS

PANEL A: THE ANEMIAS (Presidential Ballroom)

INTRODUCTION: **James W. Watts, M.D.**

DISCUSSION LEADER:

**William Dameshek, M.D.**
Professor of Clinical Medicine, Tufts College Medical School

PARTICIPANTS:

**William Horace Bullock, M.D.**
Assistant Professor of Medicine, Howard University School of Medicine

**Charles Edward Rath, Jr., M.D.**
Assistant Professor of Medicine, Georgetown University School of Medicine

**Jack Jacob Rheingold, M.D.**
Associate in Medicine, George Washington University School of Medicine

PANEL B: POST-ANESTHETIC CARE (Pan American Room)

INTRODUCTION: **Alfred E. Brigulio, M.D.**

DISCUSSION LEADER:

**Henry Knowles Beecher, M.D.**
Dorr Professor of Research in Anesthesia, Harvard Medical School

Col. Mattingly

Dr. Duncan

Dr. Marble

Dr. Ricketts

Dr. Castleman

PARTICIPANTS:

**Charles Seymour Coakley, M.D.**
Professor of Anesthesiology, George Washington University School of Medicine

**Charles Edward Fierst, M.D.**
Chief of Anesthesiology, Children's Hospital

**Thomas Francis McDermott, Jr., M.D.**
Professor of Anesthesiology, Georgetown University School of Medicine

**Donald Harrison Stubbs, M.D.**
Clinical Professor of Anesthesiology, George Washington University School of Medicine

## WEDNESDAY, OCTOBER 16—MORNING SESSION

**Dorothy B. Holmes, M.D.**, *Presiding*
Second Vice President, The Medical Society of the District of Columbia

LARGE SCREEN COLOR TELEVISION:

9:30–10:15 PROBLEMS IN CARDIOVASCULAR DISEASE

**Colonel Thomas William Mattingly**
Medical Corps, United States Army

10:30–11:15 CURRENT STATUS IN DIABETES MELLITUS

COORDINATOR:

**Louis K. Alpert, M.D.**
Clinical Professor of Medicine, George Washington University School of Medicine

PARTICIPANTS:

**Garfield George Duncan, M.D.C.M.**
Clinical Professor of Medicine, Jefferson Medical College

**Alexander Marble, M.D.**
Assistant Clinical Professor of Medicine, Harvard Medical School

**Henry Tubbs Ricketts, M.D.**
Professor of Medicine, University of Chicago

## WEDNESDAY, OCTOBER 16—AFTERNOON SESSION

**Thomas M. Peery, M.D.**, *Presiding*
Chairman, Program Committee, 26th Annual Scientific Assembly

2:00–4:00 CLINICO-PATHOLOGIC CONFERENCE

(*New England Journal of Medicine* Series)

INTRODUCTION: **Thomas M. Peery, M.D.**

CLINICAL DISCUSSION:

**Daniel Sumner Ellis, M.D.**
Instructor in Medicine, Harvard Medical School

PATHOLOGIC DISCUSSION:

**Benjamin Castleman, M.D.**
Clinical Professor of Pathology, Harvard Medical School

*Armed Forces Institute of Pathology*

# The Scientific Exhibit

The Scientific Exhibit will be on display in the South American and California Rooms and in Foyer 3 of the Hotel Statler. Below is a list of the exhibits and the sponsors:

## SOUTH AMERICAN ROOM

| *Titles* | *Exhibitors* |
|---|---|
| Aspects of Pediatric Anesthesia | Charles E. Fierst, M.D., Francis J. O'Bryan, M.D., and Robert H. DeWitt, M.D. |
| Biliary and Urinary Tract Visualization by Single Injection of Duografin | Charles E. Bickham, Jr., M.D. |
| Blood Vessel Grafts | William L. Jamison, M.D. |
| Blood Volume Determinations | Salomon N. Albert, M.D., William A. Spencer, M.D., and Chalom A. Albert, M.D., Departments of Anesthesiology and Surgery, District of Columbia General Hospital |
| Clinical Study with Orinase (Oral Insulin Substitute) | Maurice Protas, M.D., and William Kurstin, M.D. |
| Congenital Gastrointestinal Anomalies in Infancy | Leon Gerber, M.D. |
| Continuous Visual Monitoring of 2 Mev Rotational X-Ray Therapy | J. Robert Andrews, M.D., Philip Rubin, M.D., and Mr. Robert W. Swain, Radiation Branch, National Cancer Institute, National Institutes of Health |
| Dermatological Standardization of Perfumes | Raymond Allen Osbourn, M.D., Thomas W. Tusing, M.D., Francis P. Coombs, M.D., and Edward P. Moorish, M.S. |
| Diaphragmatic Herniae | John M. Keshishian, M.D., and Brian Blades, M.D., Department of Surgery, George Washington University School of Medicine |
| Evaluating Hearing in the Young Child | Allan E. Walker, Jr., M.D., and Edna K. Monsees, Audiologist, Hearing and Speech Clinic, Children's Hospital |
| Glaucoma | Section on Ophthalmology, The Medical Society of the District of Columbia, and Prevention of Blindness Society of Washington, D.C. |
| Identification Cord Clamp | J. Bay Jacobs, M.D. |
| Permanent Aortic Intubation in Rats—Scientific Uses | Joseph W. Still, M.D. |
| Postoperative Complications of Gastrectomies | Philip A. Caulfield, M.D., Howard S. Madigan, M.D., Francis Carillo, M.D., and Herbert Schneider, M.D. |
| Radiation Safety for the Physician | George Tievsky, M.D. |
| Sickle Cell Anemia in Children—X-ray Findings | Roland B. Scott, M.D., T. Wilkins Davis, M.D., Angella D. Ferguson, M.D., and Henry T. Carrington, M.D. |
| Strabismus | Frank D. Costenbader, M.D., Marshall M. Parks, M.D., Dan G. Albert, M.D., and Nicholas G. Pistolas, M.D. |
| Surgical Approaches to Tumors of the Oropharynx | Calvin T. Klopp, M.D., and T. Crandall Alford, M.D. |
| The Physician as a Marriage Counselor | John R. Cavanagh, M.D. |

## CALIFORNIA ROOM

| *Titles* | *Exhibitors* |
|---|---|
| Brucellosis and the Heart | Thomas M. Peery, M.D., and Roger H. Shannon, M.D., George Washington University School of Medicine |
| Effect of Meprobamate and Alcohol on Reflexes | James G. Miller, M.D., Mental Health Research Institute, University of Michigan, Ann Arbor |
| Mental Deficiency in Children | Retarded Children's Clinic, Georgetown University Medical Center |
| Education of the Diabetic | Adolph Friedman, M.D. |

## FOYER 3

| *Titles* | *Exhibitors* |
|---|---|
| Medical Photography at the Armed Forces Institute of Pathology | Julius Halsman, Chief, Photography Division, Medical Illustration Service, Armed Forces Institute of Pathology |
| Pediatric Diagnostic Clinic | Captain Thomas E. Cone, Jr., MC, USN; Comdr. Charles L. White, MC, USN; and Lt. George J. A. Magnant, MC, USN, United States Naval Hospital, Bethesda, Maryland |
| The Hands in Arthritis and Related Rheumatic Conditions | Darrell C. Crain, M.D., and James A. Kehoe, M.D. |
| The Pathologist and the Modern Museum | Colonel H. W. Coddington, MSC, USA, Acting Curator, Medical Museum, Armed Forces Institute of Pathology |

# Motion Pictures

Careful selection has been made of the best scientific films obtainable. A special feature of this year's program will be "The Doctor Defendant" and "The Medical Witness," both widely recognized as the best films on the subjects that have been produced. The official program will contain a list of the films and when they will be shown. The motion pictures will be seen in the New York Room from 9:00 a.m. to 5:00 p.m., daily.

# Registration

Members of the Medical Society may register prior to the opening of the Assembly at the Society's Executive Offices on Thursday and Friday, October 10 and 11, between 9:00 a.m. and 5:00 p.m. The Registration Section at the Hotel Statler will be located in the Federal Room and will open October 14 at 8:30 a.m. Visiting physicians and Society members, not previously registered, may register and secure badges in the Registration Section. Invitations are extended to officers of the Army, Navy, Air Force and Public Health Service, physicians employed by the Veterans Administration and other Governmental agencies, and members of the American Academy of General Practice. Invited, too, are residents, interns, senior medical students, dentists, pharmacists, nurses, and others. *There is no registration fee.*

# TV Premiere

Col. Schafer

The opening day of the ASSEMBLY will feature the first showing anywhere by a medical society of a closed circuit television program *in color* on a *large screen*. The telecasts will originate from various medical institutions in the Washington Metropolitan Area. They will be produced under the direction of Colonel Paul William Schafer, Director of Television Division, Walter Reed Army Medical Center. The first showing will be a half-hour program, October 14, beginning at 11:30 a.m. in the Presidential Ballroom. The Tuesday program will start at 9:30 a.m. and continue for a half hour, but the Wednesday program will be much longer, 9:30 to 12 noon. The telecasts are made possible through the generosity of The Upjohn Company, Kalamazoo, Mich.

# Luncheons and Dinner

Members planning to attend the Medical Society Luncheon on the opening day of the ASSEMBLY, Monday, October 14, must register and secure their tickets at the Society's Executive Offices on Thursday or Friday, October 10 and 11. *Each Active and Life member is entitled to one ticket without charge, as long as they last.* Associate and Affiliate members and non-members of the Society may purchase luncheon tickets at a cost of $3.75 each.

Tickets for luncheons given by the George Washington University Medical Society and the Georgetown University Medical Alumni may be obtained at the District of Columbia Medical Society's Executive Offices on October 10 and 11, or following the opening of the ASSEMBLY in the Registration Section.

Annual Dinner tickets for the closing event of the ASSEMBLY, to be held in the Presidential Ballroom at the Statler on Wednesday at 7:30 p.m., can be obtained by calling the Society's Executive Offices (District 7-3111) or by letter. Reservations will be confirmed only upon receipt of check. Dinner tickets will be $8.50 each. The dinner this year will be given in honor of the World Medical Association. Present will be the high officials of that organization and other distinguished guests. A musical program will be presented (see Calendar of Events).

# Dinner for Doctors' Staffs

An annual event, sponsored by the Medical Society's Committee on Public Information and Education for the fifth time this year, is the Annual Dinner for Doctors' Office Staffs.

Included in the invitations to the dinner are doctors' secretaries, assistants, nurses, technicians, and receptionists. As in past years, the dinner will be held in the Presidential Ballroom of the Hotel Statler, on Tuesday, October 15, 1957, at 7:00 p.m.

The program will feature "Quiz the Experts on the Doctor's Office"—a panel-type presentation in which physicians will predominate among the panelists. The following compose the panel:

DR. DARRELL C. CRAIN, Assistant Clinical Professor of Medicine, Georgetown University School of Medicine

DR. HUGH H. HUSSEY, Professor of Medicine, Georgetown University School of Medicine; member of the Board of Trustees of the AMA; and Medical Editor of GP, official publication of the American Academy of General Practice

MRS. CHRISTINE LATTIN, representing Doctors' Office Assistants

In addition to this part of the program there will be music by the Eddie Pierce Trio and the Doctors' Dixieland Band.

All physicians are urged to purchase tickets for their staff. Tickets are $6.50. This will about cover the cost of the dinner. Reservations should be made on forms which will be sent every physician.

# Calendar of Events

*All Meetings at the Hotel Statler*

### MONDAY, OCTOBER 14, 1957

| | |
|---|---|
| 8:30 A.M. | Registration—Federal Room |
| 9:00 A.M. | Scientific Exhibits open for inspection in South American and California Rooms and Foyer 3 |
| 9:45 A.M. | Address of Welcome: **James Winston Watts, M.D.**, President, The Medical Society of the District of Columbia |
| 10:00 A.M.–12:00 Noon | Scientific Program* |
| 12:30 P.M.–2:00 P.M. | Medical Society Luncheon—Presidential Ballroom<br>Award Ceremony: John Benjamin Nichols Award to JUNIOR LEAGUE OF WASHINGTON. Award will be accepted by MRS. RICHARD B. WATHEN, President of the League<br>SPEAKER: **Elmer Hess, M.D.**, Chairman, Health Resources Committee, Office of Defense Mobilization; Past President, American Medical Association<br>SUBJECT: "What Our Times Demand of the Physician" |
| 2:30 P.M.–4:30 P.M. | Scientific Program |
| 5:00 P.M. | Women's Medical Society Reception—Pan American Room |

Dr. Hess

### TUESDAY, OCTOBER 15, 1957

| | |
|---|---|
| 9:00 A.M. | Registration—Federal Room |
| 9:30 A.M.–12:00 Noon | Scientific Program |
| 12:30 P.M.–2:00 P.M. | Georgetown University Medical Alumni Luncheon—Presidential Ballroom<br>SPEAKER: **The Honorable Eugene J. Keogh**, Member of Congress from New York and co-author of the famed Keogh-Jenkins bill<br>SUBJECT: "Retirement Plan for the Self-employed" |
| 2:30 P.M.–4:30 P.M. | Scientific Program |
| 7:30 P.M. | Fifth Annual Dinner for Doctors' Office Staffs, featuring "Quiz the Experts on the Doctor's Office"<br>**George Maksim, M.D.**, Moderator |

Mr. Keogh

PANEL MEMBERS:

**Darrell C. Crain, M.D.**, Assistant Clinical Professor of Medicine, Georgetown University School of Medicine

**Hugh H. Hussey, M.D.**, Professor of Medicine, Georgetown University School of Medicine; member of the Board of Trustees of the AMA; Medical Editor of GP

**Mrs. Christine Lattin**, representing Doctors' Office Assistants

### WEDNESDAY, OCTOBER 16, 1957

| | |
|---|---|
| 9:00 A.M. | Registration—Federal Room |
| 9:30 A.M.–12:00 Noon | Scientific Program |

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* The Scientific Program will be presented in the Presidential Ballroom and Pan American Room.

12:30 P.M.-2:00 P.M. George Washington University Medical Society Luncheon—Presidential Ballroom
SPEAKER: **John L. Parks, M.D.,** Dean of George Washington University School of Medicine
SUBJECT: "Medical Transitions"

2:30 P.M.-4:00 P.M. Scientific Program

Dr. Parks

### ANNUAL DINNER HONORING THE WORLD MEDICAL ASSOCIATION

6:30 P.M. Reception—Congressional Room
Hosts: PEOPLES DRUG STORES, INC.

7:30 P.M. Dinner—Presidential Ballroom

PROGRAM:

Medley of National Anthems by EDDIE PIERCE'S ORCHESTRA

Presentation of Certificate of Meritorious Service to WALLACE M. YATER, M.D., Washington, D. C.

INTRODUCTION: **Louis H. Bauer, M.D.,** Secretary General, World Medical Association

Musical Interlude by DOCTORS' SYMPHONY ORCHESTRA; RICHARD DIRKSEN, Conductor

SPEAKER: **T. Clarence Routley, M.D., C.B.E., LL.D., F.R.C.P.(C),** Consultant General to the World Medical Association; Past President, British Medical Association; Past President, Canadian Medical Association

SUBJECT: "One World in Medicine"

Dr. Routley

# The Technical Exhibit

The Technical Exhibit will be on display in the Congressional and Federal Rooms and Foyer 2. A list of the exhibitors follows:

| | *Booth No.* |
|---|---|
| ABBOTT LABORATORIES | 13 |
| A. S. ALOE COMPANY | 39 |
| ARCUM PHARMACEUTICAL CORPORATION | 34 |
| AYERST LABORATORIES | 55 |
| BABY DEVELOPMENT CLINIC | 1 |
| BAKER LABORATORIES, INC. | 58 |
| BETH-MONT SURGICAL SUPPLY COMPANY | 30 |
| BEUCHLER'S, INC. | 22 |
| BORDEN COMPANY | 21 |
| BRAYTEN PHARMACEUTICAL COMPANY | 60 |
| BURROUGHS, WELLCOME & COMPANY | 36 |
| BURTON, PARSONS & COMPANY | 45 |
| CAPITAL CREDIT CORPORATION | 55A |
| CIBA PHARMACEUTICAL PRODUCTS, INC. | 19 |
| DAVIS, ROSE & COMPANY, LTD. | 27 |
| DESITIN CHEMICAL COMPANY | 2 |
| DIETINE COMPANY | 63 |
| DOHO CHEMICAL CORPORATION | 15 |

| | *Booth No.* |
|---|---|
| EATON LABORATORIES | 49 |
| C. B. FLEET COMPANY, INC. | 33 |
| GEIGY PHARMACEUTICALS | 62 |
| THE GIBSON COMPANY | 7 |
| CHARLES C. HASKELL & COMPANY, INC. | 40 |
| H. J. HEINZ COMPANY | 57 |
| HOFFMANN-LA ROCHE, INC. | 4 |
| HOLLAND-RANTOS COMPANY, INC. | 3 |
| KLOMAN INSTRUMENT COMPANY | 46 |
| KNOLL PHARMACEUTICAL COMPANY | 9 |
| THE LIEBEL-FLARSHEIM COMPANY | 31 |
| ELI LILLY AND COMPANY | 6 |
| MALTBIE LABORATORIES DIVISION | 68 |
| MAXWELL & TENNYSON | 25 |
| MEAD JOHNSON & COMPANY | 12 |
| MEDICAL CREDIT ASSOCIATION, INC. | 67 |
| MERCK, SHARP & DOHME, INC. | 24 |
| WILLIAM S. MERRELL COMPANY | 5 |

|  | *Booth No.* |
|---|---|
| The National Drug Company | 11 |
| Organon, Inc. | 56 |
| Ortho Pharmaceutical Corporation | 65 |
| Parke, Davis and Company | 61 |
| The E. L. Patch Company | 38 |
| Peoples Drug Stores, Inc. | 35 |
| Pet Milk Company | 32 |
| Pfizer Laboratories | 16 |
| Wm. P. Poythress & Co., Inc. | 47 |
| The Purdue Frederick Company | 43 |
| R. J. Reynolds Tobacco Company | 64 |
| A. H. Robins, Inc. | 50 |
| J. B. Roerig & Company | 69 |
| Ross Laboratories | 48 |
| Sanborn Company | 18 |
| Sandoz Pharmaceuticals | 20 |
| W. B. Saunders Company | 37 |
| Schering Corporation | 17 |
| Julius Schmid, Inc. | 59 |
| G. D. Searle & Company | 42 |
| Smith, Kline & French Laboratories | 23 |
| E. R. Squibb & Sons | 44 |
| The Upjohn Company | 66A |
| U. S. Vitamin Corporation | 8 |
| Van Pelt & Brown, Inc. | 10 |
| Varick Pharmacal Company, Inc. | 66 |
| Walker Laboratories, Inc. | 26 |
| Warner-Chilcott Laboratories | 41 |
| White Laboratories, Inc. | 29 |
| The Williams & Wilkins Company | 28 |
| Winthrop Laboratories, Inc. | 14 |

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# President's Page

## THE 26th ANNUAL SCIENTIFIC ASSEMBLY

The primary purpose of the ANNUAL SCIENTIFIC ASSEMBLY is, of course, the advancement of medical knowledge. Of almost equal importance is the opportunity afforded members to meet each other, to learn to know each other a little better, to exchange ideas, and to iron out differences of opinion.

Medical science has been advancing so rapidly that it is difficult to keep abreast of its progress. It is also difficult to answer questions which patients ask about the latest advancements in medicine. The public is interested and kept well informed by keen, alert science editors. Newspapers carry reports of medical meetings the following day, and news magazines the following week, whereas it may be a year before the article is published in a medical journal. There are times when we think the press raises false hopes by giving too much attention to a new operation or drug. The difference in attitude between the two professions was explained in an address before our Medical Society by a prominent newspaper editor, who said: "To the medical profession what is new is unproven, but to the press what is new is news."

Technics of presenting data have developed along with scientific advancement and our Committee on Arrangements has selected the best. Panel discussions on subjects of broad interest have been set up so we have a critical analysis by experts in the field. While speakers probably occupy the stellar roles, they have stiff competition from the exhibitors. Doctors like to stop by booths, both scientific and commercial, examine photographs, charts and tracings; they like to talk with the exhibitor and compare their own cases with his. Just an opportunity to sit down and talk may be the important thing, and sometimes more is learned by lunching together than at a scientific session.

The clinicopathologic conference and motion pictures always have an appeal. This year the ASSEMBLY is pioneering in large-screen color television. It has fascinating possibilities, and we believe that it has something which neither speakers nor motion pictures alone can offer.

When I first started going to medical meetings it was exciting to see the men I had heard about in medical school, and whose books and articles I had read. I still find it exciting to meet the people who are doing original work. I have never attended a convention without learning something of value, and I have rarely been to one I did not enjoy. I am looking forward to going to the SCIENTIFIC ASSEMBLY and hope that you too will be there.

James W. Watts

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# *Editorials*

## HEALTH AND WELFARE COUNCIL OF THE NATIONAL CAPITAL AREA

The idea of an area-wide health and welfare planning organization for Metropolitan Washington dates back more than 25 years. At 11:30 a.m., Tuesday, July 30, 1957, the idea became a reality, when officials of the newly incorporated Health and Welfare Council of the National Capital Area signed agreements with 7 independent chests and welfare planning councils, whereby the functions of these agencies will be carried out through the new metropolitan organization. The broad objective of the Health and Welfare Council is to tackle area-wide problems; in its approach it recognizes the individual community and provides for a regional office in each local area.

The first written recommendation concerning a metropolitan planning agency appears to have been made in 1939, when a Study Committee of the Washington Council of Social Agencies pointed out that "The admission of suburban agencies to the Chest and Washington Council and the trend toward Greater Metropolitan Washington as a community concept would appear to call for only one Council of Social Agencies, to function in the planning area."

In 1947 a Social Survey Committee report to

***Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.***

the Washington Council of Social Agencies recommended that the Washington Council "affiliate itself with community councils in the metropolitan area to establish some machinery to plan and act in relation to social problems that are the concern of more than one area, to consult with the Community Chest Federation on allocation of funds to geographic areas, and to consider the establishment of a research division serving all areas, and other necessary central services."

One of the most fundamental recommendations of the Metropolitan Washington Health and Hospital Survey of 1946 was the establishment of an area-wide hospital council and joint study and planning regarding metropolitan health problems. The Hospital Council of the National Capital Area became a reality in 1946. Last year consolidated, area-wide fund-raising for voluntary health and welfare agencies was accomplished through the organization of the United Givers Fund.

Citizen interest in and support for a metropolitan health and welfare planning agency have steadily increased over the years. Specific plans for such an organization began to crystallize this year when a group of men and women, including civic leaders and volunteers in health and welfare planning from all parts of the area, signed a charter to organize the Health and Welfare Council of the National Capital Area. The incorporators included officials of the 6 Chests and Planning Councils and leaders in Government, business, the professions, the press, organized labor, and homemakers.

Through the able and competent leadership of this group every aspect of community welfare planning was carefully considered and a general plan for the new organization was developed. Need, purposes, management, organizational and staff requirements, agency and citizen participation, finance, local-central relationship, and implementation were among the factors considered.

The purposes of the Health and Welfare Council as stated in its By-laws are to: (1) coordinate health and welfare services; (2) assemble facts as to needs and the resources to meet them; (3) develop efficient and adequate services; (4) coördinate the activities of all health and welfare organizations in the area; (5) provide common services to its member agencies; (6) obtain, allocate and distribute funds to its member agencies.

Thus the new organization has emerged out of the goodwill, determination and coöperation of many men and women representing the health, welfare and civic interests of every community in the Metropolitan Area. And in taking this step the National Capital Area now joins the few far-sighted communities in other sections of the country that have recognized and acted on the growing need for metropolitan health and welfare planning. This is in keeping with the concepts of medical leaders as reflected by the recent action of the Medical Society of the District of Columbia in organizing the Medical Council of the Washington Metropolitan Area for the purpose of considering medical problems of mutual interest to the public and physicians in the various communities.

The formation of the Health and Welfare Council is also in keeping with public health principles and the current concepts of public health leaders. The American Public Health Association Task Force Arden House Conference Report in October 1956 had this to say about regionalization—the public health community:

> "In the field of public health there is need for definition of functional areas most suitable as geographic bases for planning programs. Such a defined unit need not be coterminous with each existing political jurisdiction, but should be determined by the job to be done, taking into consideration topography, social and economic conditions, communications, and transportation factors.
>
> "The interdependence of areas with higher resources and those with lesser resources must be recognized. Through regional planning and administrative leadership, these areas must be considered together for mutual improvement and extension of service and education."

Important details for the efficient functioning of the Health and Welfare Council remain to be worked out. If the level of knowledge, goodwill, coöperation and understanding which has gone into the development of the new organization continues to prevail, there is every reason to expect that a high degree of success will be achieved in health and welfare planning for the National Capital Area.

Walter O. Cromwell, M.P.H.
*Health Consultant,*
*Health and Welfare Council of the National Capital Area*

## THE SOCIETY'S PROFESSIONAL LIABILITY INSURANCE PROGRAM

One of the many problems which confront our profession and upon which our Society must continually take a more positive and progressive attitude is the incidence and prevention of malpractice claims. With the realization that the majority of these claims are without foundation in fact, these suits should never be compromised unless an obvious error is evident. With this basic concept in mind, your Committee on Professional Liability Insurance carefully studied the proposals of several insurance carriers and, as you will recall, final approval of the coverage offered by the St. Paul Companies was voted on September 21, 1955. Among the many features of the proposal offered by the St. Paul Companies were the following:

1. Broad professional liability coverage without numerous exclusions.
2. Vigorous defense of all non-meritorious claims.
3. Close liaison and coöperation between the individual doctor, the medical advisory committee, and the St. Paul Companies for the prompt and effective handling of all claims without infringement upon the individual doctor's freedom of action or legal rights.
4. Improved rate possibilities through periodic review of experience, through education to reduce the number of claims, and through premium determination on a local basis.

The most helpful and mutually beneficial results of an insurance program of this type are the interchange of ideas between the insurance company and the Society. By their very nature, professional liability claims are such that the decision is one of determining whether the course of treatment given corresponds to the standard of care which the ordinary doctor would exercise in similar circumstances. It follows that the opinion of various doctors in the community is indispensable information to the insurance carrier. On the other hand, it affords an opportunity for the medical profession more fully to appreciate and understand the legal aspects so that proper educational programs as to cause and prevention of claims can be instituted.

In the May letter to all members, the progress of the program since its inception in 1955 was indicated. Although the participation to date has not met with all expectations, it should be remembered that enrollment is entirely voluntary on the part of each member and that the usual percentage limitation is not a requirement. Your Insurance Committee wishes to inform you again of the availability of this insurance, which was approved by your Society, since the objectives of the program can be fully realized only through the active support of the membership. In the dissemination of this information the Committee wishes to make clear that neither your Society nor any of its members wishes to create the impression that it is engaged in the solicitation of insurance, but merely to inform you of some of the essential features of the program, and to suggest, if this coverage is desired, that you contact a local agent of the St. Paul Companies.

Robert E. Moran, M.D.
*Chairman, Committee on Professional Liability Insurance*

## THE MEDICAL WITNESS

Doctors, law-abiding and generally good citizens, are in favor of the proper administration of justice. They are criticized, however, by the lawyers for their reluctance to appear in court. It is particularly difficult to persuade them to testify against one of their own profession. Lawyers complain that their requests for information about their clients are often delayed or ignored, and that some doctors have learned to elude the most astute marshals who are endeavoring to serve subpoenas. This conduct appears to the lawyers to be inexplainable and out of character for members of a profession which is devoted to the health and happiness of their fellow men. May I attempt to explain some of the reasons why this condition of affairs has come about?

The request for medical information involves the question of the confidential relationship between the doctor and his patient. It means the searching of files. Many doctors do not employ secretaries, and paper work is onerous and time-consuming. It is the forerunner to a subpoena, which always comes at an inconvenient and busy time. No mention of a fee is included in the request, and the doctor knows that only the compensation of an ordinary witness will be his after the case has been tried. If the requesting lawyer will include in his letter a statement that the doctor will be appropriately compensated for the information required, the preparation of his testimony, and his time on the witness stand, the doctor will be encouraged to coöperate promptly and wholeheartedly. The doctor is keenly aware of the difference in the fee that the expert witness will demand and the fee which is allowed the ordinary witness, which he will be.

It is not unusual for a doctor to return to his office after a hard day, with his program for tomorrow already arranged, and find a marshal waiting for him with a subpoena to appear in court at 10:00 a.m. on the following day and not to leave the court without permission. The doctor may not have seen the claimant for more than a year. So the files must be searched, literature reviewed, tomorrow's program upset. The lawyer has neglected to notify the doctor that he is about to issue a subpoena. And he has not consulted him as to the doctor's convenience. The doctor presents himself at the court house at 10:00 a.m. and may wait there until 3:00 p.m. before he is called to the stand. It would have been at least polite to give the doctor several days' notice and to arrange to telephone him on the day of the trial, one-half an hour before his testimony was to be given.

Once on the stand the doctor feels that he is on trial. He must produce evidence of dates, number of calls, charge for each, results of physical examination, and details of injury, including etiology, prognosis, and treatment. He must relate when and where he graduated, where he interned, his length of practice, his usual fees, and other matters concerning his personal life. The court will not allow him to say what he thinks or to draw conclusions. He may only testify as to what he saw and heard from the claimant. The lawyer who summoned him is polite and kind, but cross-examination is yet to come.

The opposing lawyer, who has been studying him during direct examination for defects in his armor, now takes over and in the interests of his client tries to prove that the witness is incompetent, evasive, inexperienced, and possibly untruthful. The witness, whose experience in practice has led him to believe that his reputation in the community is above reproach, leaves the stand indignant and humiliated. He resolves that court attendance in future is not for him if he can avoid it. Questions he may have had to answer really involve expert testimony. He appeals to the judge that no financial arrangement has been made for expert testimony, and his honor may instruct the doctor to answer anyway in the interests of justice.

Do you now blame the doctor for being human and for wishing to avoid the witness stand? Politeness and consideration on the part of the lawyers on both sides could help eliminate the doctor's antipathy against giving testimony. They should assume that the medical witness is telling the unvarnished truth to the best of his ability and that he is not coloring his testimony for the benefit of anybody.

We now come to the question of the difficulty lawyers encounter when they attempt to persuade one doctor to testify against another. I am sure no doctor would hesitate to testify if his colleague were involved in immoral or illegal conduct. The usual reason why the doctor is asked to testify is that the patient of the accused doctor is not satisfied with the result of his medical or surgical treatment. Of course no ethical doctor is willing to guarantee perfect results.

Lawyers should understand that the law requires doctors to fulfill only three conditions in order to be protected against malpractice. They are (1) sufficient knowledge and skill (in comparison with the doctors in the locality), (2) due diligence (he must give sufficient attention to his patient during the illness), and (3) best judgment, meaning that the doctor's mind may not be clouded by alcohol or other drug, or that he be too ill to practice). If these conditions have been fulfilled, no doctor is justified in testifying against an accused doctor. Malpractice cases often originate with dissatisfaction on the part of the patient with an unexpectedly large bill. Wisdom dictates that financial arrangements be understood at the beginning of treatment. Also criticism by friends or other doctors results in malpractice suits. No word need be spoken by another doctor. A shrug of the shoulder is all that is necessary.

A deformed bone after a fracture or a damaged heart after an illness is often considered justification to enter suit against the attending doctor by those who have no conception of the circumstances which brought about the poor result. Sequelae like these can occur in the best clinics in the country and among the most skillful doctors in the profession. Each year finds the court calendar with more and more malpractice suits against doctors. Sympathetic juries award outrageous awards to claimants. Although the mention of an insurance company is grounds for a mistrial in many jurisdictions, the juries take into consideration that the accused is insured and awards are based on the amount of interest which can be enjoyed by the plaintiff. They are also cognizant of the substantial amount of money which must be paid to the successful attorney on contingent cases (which are the vast majority). A verdict for $50,000 will yield about $2,000 a year, which the jury feels is little enough for the victim of an unfortunate result after medical treatment.

Doctors must now pay exorbitant premiums for protection against malpractice, which have increased in the last few years because of unfair and unreasonable awards.

Please, Mr. Lawyer, submit the facts of your case to an unbiased committee of the Medical Society before suing a doctor for malpractice. If you have a case, they will advise you. If you have not, you will uphold the principles of your respected profession by declining to sue.

If the doctors and the lawyers would get together and obey the Golden Rule, much misunderstanding and hard feeling could be eliminated.

JAMES A. GANNON, M.D.

# In and Out of Focus

BY THE OBSERVER

### *AMA's Gundersen*

Not long ago, a member of the Society's office staff handed your Observer a biographical sketch of Dr. Gunnar Gundersen, who became President-elect of the American Medical Association at the recent meeting in New York.

The writer went to considerable length to humanize his subject. Dr. Gundersen, he said, was "one of the Nation's best jeep drivers." A feature attraction at his 120-acre farm in Wisconsin, he reported, was a mechanical burro. Visitors, it appeared, rated Dr. Gundersen's skill in "handling" the burro as a real accomplishment. His principal hobbies, however, were described as vegetable gardening and a forestation project on his farm.

This may or may not be a fair estimate of Dr. Gundersen's "extracurricular" activities. Having never seen him thus engaged, the Observer, who has known him for 30 years, thinks of him in quite a different light. Typical of the man, in his experience, was his acceptance speech. It reflected Dr. Gundersen's innate modesty and reserve.

There are no pretensions about this fine physician, who, incidentally, is one of a family of distinguished physicians. No one would question his complete sincerity and forthrightness. Beneath the usually calm exterior there is an intensity of feeling which at times finds expression in down-to-earth directness. At such times there is never any doubt that he means what he says.

Naturally, his experience as a member of the AMA's Board of Trustees has had its effect on his thinking where medical problems are concerned. He is still what he has always been, a realist, and he is no disciple of the status quo. However, he realizes that sound progress is based on thorough knowledge and thoughtful deliberation.

The medical profession of this country can be certain that when Dr. Gundersen assumes the office of President of the AMA, they will have a leader who possesses a great deal of common sense, unquestioned courage, and integrity. This may mean more than is perhaps generally realized by his colleagues should a crisis confront the medical profession. Considering the over-all situation at the present time, this may well occur. If it does, Dr. Gundersen will be the right man in the right place.

★

### *Eligibility for Nichols Award*

Some months ago, the Committee on Public Information amd Education sent a communication to members of the Society requesting suggestions for this year's recipient of the John Benjamin Nichols Award. It became apparent from the replies received that many members were still not familiar with the eligibility requirements for the Award. A review of the pertinent facts in regard to it would, therefore, seem in order.

The resolution adopted by the Committee and, subsequently, by the Executive Board and the Society itself, creating the Nichols Award, defines those who are eligible and how they shall be chosen in the following language:

> "Any lay person, whether a permanent or a temporary resident, or any recognized lay organization of the District of Columbia, or both, shall be eligible for this Award.
>
> "The recipient of the Award, whether it be a lay person or a lay organization, or both, shall be nominated by the Committee on Public Information and elected by the Executive Board of the Medical Society of the District of Columbia on the basis of outstanding contribution to the health of this community. It is recommended that the names of individuals and organizations be sent in by members and friends of the Medical Society of the District of Columbia."

The Committee that made the first selection—The Variety Club of Washington—in 1953 agreed that the eligibility requirements were too broad; that unless limitations were placed on the field from which a choice could be made the Award would lose some of its significance. For example, the numerous official and voluntary health agencies and their paid administrators would be eligible in accordance with the wording of the resolution creating the Award. This, in the opinion of the Committee, was not the intention of those who had most to do with its establishment.

The Award, the Committee agreed, was created for the purpose of recognizing organizations and individuals not engaged primarily in the health field but who had made outstanding contributions to the betterment of the health of the community. The Executive Board concurred in this view, as did the Society. Since that time selections have been made on this basis.

Still, there are apparently many members who are not aware of this interpretation. Several letters have been received recently urging the selection of an organization or an individual that the writer apparently did not know was ineligible. This prompted the Committee, at its meeting on June 25, 1957, to reiterate its position on the subject by adopting the following motion: "That any lay person whose contributions to the health of the community are a part of his paid job shall not be eligible for the Nichols Award nor shall the Award be given to any organization or institution whose primary activity is in the health field." Again, the Board concurred in the Committee's action.

It is to be noted that this does not eliminate from consideration a lay person who contributes his or her services, without compensation, to an official or voluntary health organization. While no such person has yet been chosen for the Award, he well might be.

It is to be hoped that there will be no further misunderstanding about the eligibility of persons for the Nichols Award and the primary purpose for its existence—that is, to honor those who serve the community beyond the call of duty in matters relating to health.

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### *The Parking Problem*

In common with other citizens, physicians who practice in the Washington Metropolitan Area are finding parking increasingly difficult. The situation was somewhat relieved when an arrangement was entered into by the Society, the Department of Vehicles and Traffic, and the Metropolitan Police Department under which physicians on emergency calls were permitted to park in areas in which they would ordinarily be excluded. Most members are by now familiar with the cards provided by the Society to be placed on the windshield when physicians are on such calls.

However, no solution has been found for the parking difficulties encountered by physicians attending meetings at the Society's headquarters. The area surrounding the building has long since become extremely congested and, frequently, on meeting nights not only is every available space on the streets occupied, but if there is some social event at one of the nearby hotels, parking lots and garages in the immediate vicinity often are filled to capacity.

Of course, Washington is not unique among large cities in this respect. In his address to the New York Academy of Medicine early this year, the retiring president, Dr. Edward J. Donovan,[1] had this to say:

> "Almost everyone has a parking problem today, but since our situation has been given so frequently as the cause of decreased attendance at meetings it seemed worthwhile to investigate further. With the demolition of three tenements adjacent to the Academy on 103rd Street, we obtained a vacant lot 100 by 75 feet which we thought might be used for parking. We consulted a group of parking experts who, after considerable study, stated that we had three choices:
>
> 1. Fence and pave the property and make a simple parking lot which would cost very little but, since this

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[1] Bull. New York Acad. Med., 1957, 33, 230.

area could accommodate only 24 cars, it would in no way solve our problem.

2. Build a ramp garage which would provide space for two or three times as many cars but which would be expensive to erect and to maintain as it would need two attendants at a salary of $4,500.00 each per year.

3. We could build what is called a pigeon hole garage several stories high, entirely automatic, which would accommodate many more cars but might cost $200,000.

"The experts finally advised us to give up the idea of establishing parking facilities on a large scale at the Academy as it would be so costly as to be impractical. However, we have decided to make the space into an attended parking lot of the simplest type available free of charge to Fellows of the Academy from the hours of 4 p.m. to midnight—the hours when they need it most. This will accommodate all of the cars now parked on both sides of 103rd Street between Fifth and Madison Avenues, and will at least supply a rough estimate of the actual demand for parking space."

From time to time the Executive Board and various committees have discussed the solution to the Society's parking problem. Some years ago it was thought that the building adjacent to the Society, now being remodeled, might be converted for parking purposes. This proved to be impractical because the few cars which could be accommodated would not justify the investment. Then, too, additional office space was required and the erection of additional stories on the original building at 1718 M Street for this purpose was not found feasible. In fact, contrary to long-held belief, the construction of the building would not permit it.

Among other efforts was an experiment which, although it failed, suggested a practical if not a satisfactory solution. Shortly after World War II, the Society entered into an agreement with a garage on M Street, about a block from its building, for parking by its members at reduced rates. Too few took advantage of the arrangement and it was discontinued.

It has been suggested that each member be provided with a pocket-sized map of the area surrounding the Society's building on which would be spotted parking lots and garages. There are several not over 2 or 3 blocks away that usually have space available when immediately adjacent ones do not. This proposal will be presented to the Executive Board at an early meeting.

To some members who recall regular Wednesday night meetings and now only visit the Society's building infrequently, efforts to provide parking facilities or to improve the parking situation may seem a waste of effort. Why do anything when so few of our meetings are held in the Society's building? The answer is, that with the passing of Wednesday night meetings and the substitution of the Midwinter Seminar, there has been a steady increase in meetings of Sections and special medical societies. There are very few evenings from October to May when the Society's auditorium or the library are not in use.

Obviously, a satisfactory solution to the parking problem remains to be found. In the meantime, stop-gaps will have to be resorted to in order to relieve the situation. The one suggested above would seem to have sufficient merit to be worthy of a trial.

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### *A Familiar Voice*

An article in the May 1957 issue of the *International Record of Medicine* by Dr. Morris Fishbein, entitled, "What I Have Learned in Life," revived memories of a remarkable career in organized medicine. It also pointed up the fact that some of his personal characteristics were obscured when he was in his heyday as a medical leader, or that his subsequent experience has had a tempering effect.

No figure in the medical profession was better known to the people of this country some 8 to 10 years ago than organized medicine's spokesman, Dr. Morris Fishbein. An eloquent and often belligerent leader in the AMA's fight against compulsory health insurance, he kept the controversy on this subject at white heat. Whenever the opportunity offered, he threw down the gauntlet to his opponents. It appeared that the more bitter the opposition, the better he liked it. Few could excel him in rough and tumble debate.

Whatever else one might say about Dr. Fishbein, he is never dull. In fact, his unusually keen mind, the possession of which he is not adverse to admitting, is superior to that of most of his fellows. He is a voracious reader of all sorts of literature and has a remarkably retentive memory. Widely recognized as an authority on medical writing, he was, during his tenure as Editor of *The Journal of the American Medical Association*, much in demand as a speaker on that subject.

Dr. Fishbein still has his admirers, among them those who respect his abilities even though they disagree with his views on the social and economic aspects of medicine. During most of his association with the AMA, he dominated the organization. He was its voice—there never was any question about that. Later, when he was no longer in favor, a resolution was adopted by the House of Delegates which contained this surprising statement: "The public has come to believe that the Editor is spokesman for the Association"—as if this had not been a fact for a long, long time.

Most physicians have heard very little of Dr. Fishbein since his tenure at the AMA came to a close in 1949. Undoubtedly, many have been of the belief that separation from the AMA wrote finis to his career. The fact is, however, that he is about as busy as he ever was. He is at present Consultant Medical Editor to Doubleday and Company and the Blakiston Company. He is also Medical Editor of the Encyclopedia Brittanica and Brittanica Book of the Year, Editor of the *Bulletin of the Society of Medical History* of Chicago, a member of the Board of Chief Editors of *Excerpta Medica*, and Contributing Editor to *Postgraduate Medicine*. This should be enough for any man.

As indicated in the beginning, what stimulated these recollections was Dr. Fishbein's recently published philosophical observations. Those who have known him, and even those who have become acquainted with him through published accounts, should find the following quotations from his article interesting.

"When I was 18 my father had what in those days was called a 'nervous breakdown.' From that I learned the value of what is called today 'mental hygiene.' I learned the danger of loss of temper, which is today called an 'emotional upheaval.' I learned not to shout in anger, and even my secretary, who has been with me more than a score of years, will affirm that I do not raise my voice in either instruction or correction. In fact, I learned tolerance. My friend of many years, Harrison Shoulders, once said that he had never known me to be intolerant of anything but stupidity."

"In my work in medical organization," Dr. Fishbein continues, "I learned that a leader frequently inclines to get so far ahead of his followers that he loses them. Eventually, he may become so impatient of them that he loses interest in leadership.

"I have only rarely suffered from my own or other people's prejudices. I have learned that many who fail want to ascribe their failures to prejudice but those who are fit to advance are likely to advance regardless of prejudice.

"Nothing rejuvenates a lagging mind like relaxation with culture. Here I define culture as including art, literature, music, eating, drinking, travel, reading, and all the finest things of life.

"I like people. I like old people, young people, and most of all I like children. I have 11 grandchildren. I shall never tire of observing their development, and I am convinced that our immortality lies in our descendants.

"Finally, the greatest satisfaction of life is being satisfied. Those who envy too many others, those who yearn for the unattainable, those who feel that they never had equal opportunity or a square deal will never have a satisfactory life. At the risk of being considered maudlin, I confess that just at this moment there popped into my mind a picture of a well known crooner singing 'Count Your Blessings' on television. I have had so many that I could hardly begin counting them."

Those who have known Dr. Fishbein will find it difficult to reconcile some of these views with a man so widely known for his combative spirit. Some will find his observations on medical leadership paradoxical. Whatever the reaction of others may be, it seems to the Observer that time has not only mellowed Dr. Fishbein, as it does most men, but that he has found contentment—a great treasure indeed.

### *Relatives Visiting the Sick*

In the training of physicians, *The Lancet* (London)[1] observes, too little attention is paid to the effect which visitors, particularly relatives, have on hospitalized patients. As a result, "many never learn to appreciate . . . the profound effect visitors have on sick people in the hospital."

"Most of them take infinite pains," *The Lancet* continues, "to spare their patients physical hardship and mental anguish; but between three and four in the afternoon any well-meaning friend can talk the convalescent case of coronary thrombosis into a heart-attack." On the other hand, "If scant attention is being paid to the effect of visitors on hospital patients, most doctors feel that the effect patients may have on their visitors hardly concerns them at all."

Chiefly concerned with the impact of relatives visiting hospitalized patients, *The Lancet* has this to say:

> "But if the protective isolation of a hospital should give the housewife her first chance in years to sleep undisturbed, to eat well, and to talk in complete sentences, to the proud mother regular visitors with the family news are as vital as rest, good food, and shots of the latest wonder-drug; and to the gravely ill the quiet presence of a husband or mother, just sitting close to the bed, passing a drink, or (in answer to a familiar flicker of the eyelid) adjusting a crumpled pillow, brings comfort and solace that the best nursing care can never replace."
>
> "Children require strong emotional support in an emergency . . . and 'the mother is the most effective prophylactic.' . . . Nothing can be more comforting to a child coming around from an anaesthetic (and more trouble-saving to the nursing staff) than the mother's smile."
>
> "On the mentally ill, even more than on children and the old, outside visits may have a dramatic effect."

But *The Lancet* warns, "Seriously ill patients can be so changed in appearance that relatives, seeing them thus for the first time, may be unnecessarily alarmed; and their alarm will often communicate itself to the patient. And children should not be allowed to see adults gravely ill—or even Granny's familiar face without her false teeth—except for some special reason." Then, too, "Mothers deserve a warning before being confronted with an unconscious child smeared with blood and vomit."

The difficulty encountered by relatives seeking accurate information about a patient's condition often leads to serious misunderstanding. "There is no doubt that parents are still being fed on junior nurses' garbled versions of their child's major illness; and few are the happy doctors who have not been summoned to family conclaves where worried relatives try to piece together dropped hints from sister-in-a-hurry, conversational fragments from patients-in-the-know, and ambiguous statements from popular health manuals."

Physicians are admonished:

> "To interview relatives is a subtle and exacting art (far more complicated than interviewing patients) which should be taught to every medical student as assiduously as the examination of the chest. But because the young doctor has received no such education, he is oppressed by the fear that under the anxious scrutiny of relatives he will make a fool of himself. And in fact, when indignantly (for there is usually some more pressing and congenial task to hand) he faces his ordeal, his performance is thoroughly lamentable. It is difficult to decide which is worse—the cocky 'just-leave-it-to-us-and-don't-you-worry' attitude of some, or the nervous diffidence of others—and hilarious stories about relatives overheard mispronouncing medical jargon cast a poor light on their learned source of origin. The losers in this cruel game are, of course, the doctors even more than the relatives. The wise clinician not only talks to the family, but also makes them talk to him; and he takes careful note of tell-tale gaps as well as of the tale they tell. All relatives when first seen are upset; and, not being under the special license of the sick to unburden their souls without restraint, their conversation becomes a mixture of wishful thinking, morbid fantasy, and time-honoured euphemisms. . . . But misinterpretations can be as revealing as hard facts; and even the silences of the strong silent father or the meek masochistic mother can point to the need for treating the relatives as well as the patient."

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[1] Lancet, 1957, **272,** 975.

In summing up, *The Lancet* has the following advice to offer, not only to physicians, but to those responsible for the administration of hospitals.

"We should appreciate the immense nervous strain, and often the financial burden, that hospital visiting can entail; and hospital management committees, which justly pride themselves on providing all comfort for their patients, should look after visitors with equal consideration. Their difficulties may be great—they range from deterring visitors from collecting expensive souvenirs to providing lavatories—but these must be overcome. The good name of a hospital depends today—and it will depend even more in the future—on its coöperation with the families and friends of the sick as well as on its care of patients. These twin tasks are indeed already inseparable."

T. W.

## MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, July 22, 1957, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

*Active Members*

Roy E. Albert, George Washington University Cancer Clinic
Ernest Lee Braddock, 1028 Seventh Street, N.E.
Donald A. Brooks, 3229 11th Street, N.W.
Salvador J. Cosimano, Jr., 2701 Connecticut Avenue, N.W.
David S. Davis, 8608 Flower Avenue, Takoma Park, Md.
Jerome H. Epstein, 2244 Washington Ave., Silver Spring, Md.
Louis E. Fettig, 1726 Eye Street, N.W.
Allan Hall, 1400 South Barton Street, Arlington, Va.
Gregory T. Henesy, 4812 Westway Drive, N.W.
John J. Hughes, 1150 Connecticut Avenue, N.W.
George W. Metcalf, 2420 Elm Street, Falls Church, Va.
Ping-nie Pao, 5437 Connecticut Avenue, N.W.
William A. Spencer, 5000 34th Street, N.W.
Frank J. Talbot, 1820 23rd Street, S.E.
Nan Van Wagenen, 2223 H Street, N.W.
William J. Washington, Jr., 1346 Adams Street, N.E.

*Associate Members*

Habeeb Bacchus, 8602 Farrell Court, Chevy Chase, Md.
John J. Canary, 3811 Beecher Street, N.W.
John Colen, 10413 Montrose Avenue, Bethesda, Md.
Edward C. McGarry, 6400 Winston Drive, Bethesda, Md.
William J. Mitchell, 6900 Strathmore St., Chevy Chase, Md.
Bernard F. Peacock, 2707 Kenton Pl., Hillcrest Heights, Md.
John D. Porterfield, Room 5600, H.E.W. Building North
Joseph W. Siewick, 1817 Beverly Avenue, Falls Church, Va.

*Affiliate Member*

Horace Wright Bernton, 10511 Summit Ave., Kensington, Md.

*Resident-Intern Members*

Henry De Costa Bell, Freedmen's Hospital
Walter H. Morris, 3650 11th Street, N.W.

The following applicants for membership will be voted on at the meeting of the Executive Board, October 21, 1957.

*For Active Membership*

Richard F. Manegold, Temple University—1950
William L. Marsh, Buffalo University—1946
Joseph Kayle Perloff, Louisiana State University—1951
Francis L. Smith, Howard University—1950
George E. Stevens, State University of Iowa—1953
John R. Weimer, Johns Hopkins University—1948

*For Associate Membership*

Robert Alberts, University of Leiden, The Netherlands—1954
Herbert E. Lane, Jr., Georgetown University—1947
Pierre Aymar Lechaux, University of Paris, France—1951
John Adams Logan, Jefferson Medical College—1916

*For Affiliate Membership*

Edward A. Beeman, Boston University—1947

*For Resident-Intern Membership*

George E. White, George Washington University—1957

Recent changes in membership status:

*Active to Associate*

Wilfred R. Ehrmantraut
Herman Eisenberg
Harold J. Jeghers
Francis C. Kirchner
Homer B. Matthews
Harry W. McCurdy
Creed F. McFall
Eugene L. Willard

*Resigned*

*Active*

Lucile Dooley
Mortimer J. Folston
Charleen G. Kilpatrick
Vernon M. Padgett
H. Robert Unger
Roy E. Whitehead

*Associate*

Emile H. Bisharat
Stewart T. Ginsberg

# EMPLOYEE HEALTH SERVICES IN NONGOVERNMENTAL ESTABLISHMENTS IN THE WASHINGTON, D.C. METROPOLITAN AREA: RESULTS OF A SURVEY

LOUIS S. REED, Ph.D., *Health Economist*
JAMES C. COFFIN, B.S., *Statistician*
*Health Conservation Section, Occupational Health Program, Division of Special Health Services, Bureau of State Services, Public Health Service, United States Department of Health, Education, and Welfare*

The Occupational Health Program of the Public Health Service wishes to develop more information on the extent, scope and character of the health services maintained by employers for their employees. To this end we undertook a survey in the Washington Metropolitan Area to determine the number and proportion of nongovernmental establishments which employed 1 or more physicians and/or nurses to provide health services to employees at the place of employment, and which had arrangements for the provision of preëmployment and/or periodic physical examinations to employees.

The present paper gives the findings of this survey. A subsequent article in next month's issue will give a fairly detailed description, based on personal visits, of the in-plant health service programs of 12 representative concerns in the area.

## THE AREA: ITS POPULATION AND WORK FORCE

The Washington Metropolitan Area consists of the District of Columbia, Montgomery and Prince Georges Counties in Maryland, and Arlington and Fairfax Counties and the cities of Alexandria and Falls Church in Virginia. As of the 1950 census the area had a total population of 1,464,000 persons. The present population, as of January 1, 1957, is estimated at 1,954,000.

The area differs from most states in that a high proportion—about 1/3—of the total experienced labor force is Government employees, while the proportion of workers engaged in manufacturing is low. The area's distribution of the work force by industry, exclusive of public administration, is compared with that for the state of Illinois in table 1.

A sizable proportion of all employed persons work in establishments with less than 50 employees—establishments so small that an in-plant health service is probably out of the question. As table 2 shows, 55 per cent of all employed persons in the Washington area, exclusive of those in Government, self-employment, railroads, nonprofit, farm and household units, work in establishments with fewer than 50 employees. This is a considerably higher proportion than for the Nation as a whole—37 per cent.

TABLE 1

*Percentage Distribution of Experienced Civilian Labor Force, Exclusive of Those in Public Administration, in Washington, D. C. Metropolitan Area and Illinois by Industry, 1950*

| Industry | Washington, D. C. Metropolitan Area | Illinois |
|---|---|---|
| | Per cent | Per cent |
| Manufacturing | 10.3 | 33.0 |
| Wholesale and Retail Trade | 24.1 | 20.1 |
| Professional and Related Services | 15.5 | 8.0 |
| Personal Services | 12.4 | 5.4 |
| Construction | 10.8 | 5.3 |
| Transportation, Communication and Other Public Utilities | 10.7 | 9.7 |
| Finance, Insurance and Real Estate | 6.5 | 3.9 |
| Business and Repair Services | 3.2 | 2.8 |
| Agriculture, Forestry and Fisheries | 2.0 | 7.1 |
| Entertainment and Recreation Services | 1.3 | 1.0 |
| Mining | 0.1 | 1.2 |
| Industry Not Reported | 3.1 | 2.5 |
| TOTAL | 100.0 | 100.0 |

SOURCE: 1950 Census of Population, Volume II: Characteristics of the Population, Table 79.

## SURVEYED ESTABLISHMENTS AND THEIR EMPLOYEES; METHODS OF SURVEY

The survey was conducted on the basis of a list of all nongovernmental establishments in the Metropolitan Area employing 50 or more persons. These establishments numbered 670 and employed 154,000 persons. The distribution of establishments and employees by size of the establishment, together with a breakdown as between manufacturing and nonmanufacturing, is shown in table 3. The survey figures show a somewhat higher percentage of employers engaged in manufacturing than is shown by the census data in table 1. This discrepancy is probably due to the fact that in some instances it was difficult to classify a firm as engaged in manufacturing or nonmanufacturing.

TABLE 2

*Nongovernmental OASI-Reporting Establishments in Washington, D. C. Metropolitan Area by Size, First Quarter, 1953*

(Exclusive of Self-employed and Nonprofit Units, Railroads, and Farm and Household Units

| Size of Establishment (No. of Employees) | No. of Reporting Establishments | Employees | |
|---|---|---|---|
| | | No. | Per cent |
| 0–3 | 13,730 | 172,000* | 54.6 |
| 4–7 | 5,460 | | |
| 8–19 | 3,965 | | |
| 20–49 | 1,745 | | |
| 50–99 | 595 | 143,000* | 45.4 |
| 100–249 | 280 | | |
| 250–499 | 65 | | |
| 500 or more | 42 | | |
| TOTAL | 25,882 | 315,000 | 100.0 |

* Estimated

SOURCE: U. S. Department of Commerce and U. S. Department of Health, Education, and Welfare, County Business Patterns, first quarter, 1953. The data for D. C. and the Maryland and Virginia counties and cities included in the Metropolitan Area have been combined.

NOTE: All manufacturing establishments of multiple-establishment concerns are generally reported as individual, separate establishments; multiple establishments of nonmanufacturing concerns, e.g., chain stores, in the same county are generally reported as 1 establishment.

For 14 organizations, employing a total of 35,000 persons within the area, data on the in-plant health services were gathered by personal visit. All other establishments were contacted by telephone, the telephone inquiry being, as a general rule, limited to asking whether or not the concern employed 1 or more physicians or nurses full- or part-time, and, if so, how many, and whether the concern had any arrangements for preëmployment and periodic examinations for all or selected groups of employees. All establishments with 250 or more employees were telephoned or visited; the smaller establishments were canvassed on a sample basis, 46 per cent of the establishments with 100 to 249 employees and 12 per cent of those with 50 to 99 employees being contacted.

## NUMBER AND PROPORTION OF CONCERNS WITH IN-PLANT HEALTH SERVICES

Table 4 shows the number and proportion of concerns in each size group with an in-plant health service; such service is defined as the provision of the full- or part-time services of a physician and/or nurse at the place of employment. None of the concerns with 50 to 99 employees and only 3.3 per cent of those with 100 to 249 employees had a service of this type. Among concerns of 250 to 499 employees, 13.1 per cent had an in-plant health service. This proportion rises to 42.4 per cent among concerns of 500 to 999 employees, 76.5 per cent among concerns with 1,000 to 2,499 employees, and 77.8 per cent among concerns with 2,500 employees or more.

TABLE 3

*Nongovernmental Establishments and Their Employees in the Washington Metropolitan Area, by Size**

(Concerns with 50 or more employees only)

| Size of Establishment (No. of employees) | All | | Manufacturing | | Non-manufacturing | |
|---|---|---|---|---|---|---|
| | No. of Establishments | No. of Employees | No. of Establishments | No. of Employees | No. of Establishments | No. of Employees |
| 50–99 | 349 | 22,439 | 66 | 4,168 | 283 | 18,271 |
| 100–249 | 201 | 28,826 | 31 | 4,552 | 170 | 24,274 |
| 250–499 | 61 | 19,973 | 20 | 6,019 | 41 | 13,954 |
| 500–999 | 33 | 23,186 | 7 | 4,520 | 26 | 18,666 |
| 1,000–2,499 | 17 | 25,398 | 5 | 7,600 | 12 | 17,798 |
| 2,500 or more | 9 | 34,399 | 0 | 0 | 9 | 34,399 |
| TOTAL | 670 | 154,221 | 129 | 26,859 | 541 | 127,362 |

SOURCE: List of All Establishments in the Area Employing 50 or More Persons, as of September 1, 1956.

* The list of establishments denoted practically all concerns with multiple units as single establishments. In other words, a chain store with multiple units in the area or a department store with several branch stores is considered as a single establishment.

Of the 9 concerns with over 2,500 employees, 2 did not have an in-plant service. Both are "chain"-type organizations with the employees widely dispersed among numerous units. In the 1,000 to 2,499 size group, of the 4 out of 17 establishments that did not have a health service, 2 were also chain-type organizations. Of the other 2 establishments that presently do not have a health service, 1 is on the point of establishing such a service. Hence, close to 100 per cent of all establishments in the Washington area with 1,000 or more employees at a single location now have or soon will have an in-plant health service.

TABLE 4

*Total Nongovernmental Establishments with over 50 Employees in the Washington Metropolitan Area and Number and Per cent Having an In-plant Health Service*

| Size (No. of Employees) | Total No. of Establishments | Total Employees | Establishments with an In-plant Health Service | | Employees in Establishments with an In-plant Health Service | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent of Total | No. | Per cent of Total |
| 50–99 | 349 | 22,449 | 0* | 0* | 0* | 0* |
| 100–249 | 201 | 28,826 | 7† | 3.3† | 950† | 3.3† |
| 250–499 | 61 | 19,973 | 8 | 13.1 | 2,725 | 13.6 |
| 500–999 | 33 | 23,186 | 14 | 42.4 | 11,032 | 47.6 |
| 1,000–2,499 | 17 | 25,398 | 13 | 76.5 | 19,498 | 76.8 |
| 2,500 or more | 9 | 34,339 | 7 | 77.8 | 27,929 | 81.2 |
| TOTAL...... | 670 | 154,231 | 49 | 7.3 | 62,134 | 40.3 |

* Estimated on basis of 12 per cent sample. There were no establishments of this size group among the sample concerns that had an in-plant health service, and it is considered unlikely that any establishment of this size would have one.

† Projected on basis of 46 per cent sample. Of 92 establishments in this size group that were canvassed, 3.3 per cent with 3.3 per cent of the total number of employees had an in-plant health service. Hence, it is estimated that among all of the 201 establishments in this size group, there would be 7 with an in-plant health service and that these 7 concerns would employ approximately 950 employees.

Forty per cent of all the workers in organizations with 50 or more workers in the Washington area are covered by an in-plant health service; that is, they have available to them the on-the-job services of a physician and/or nurse part- or full-time. It may be estimated that about 20 per cent of all nongovernmental employees in the area, including those in firms of 1 to 50 workers, have the benefit of such a service.

TABLE 5

*Number and Per cent of Establishments Employing a Physician for In-plant Health Services, and Number Employed*

| Size (No. of Employees) | Total No. of Establishments | Establishments with a Physician Part- or Full-time | | Number of Physicians Employed | | |
|---|---|---|---|---|---|---|
| | | No. | Per cent of Total | Full-time | Part-time | Total Hours per Week for Part-time Physicians |
| 50–99 | 349 | 0* | 0* | 0* | 0* | 0* |
| 100–249 | 201 | 4* | 2.2* | 0* | 4* | 16* |
| 250–499 | 61 | 3 | 4.9 | 0 | 2 | 10 |
| 500–999 | 33 | 6 | 18.2 | 0 | 7 | 60 |
| 1,000–2,499 | 17 | 10 | 58.8 | 1 | 11 | 124 |
| 2,500 or more | 9 | 7 | 77.8 | 4 | 13 | 107 |
| TOTAL......... | 670 | 30 | 4.5 | 5 | 37 | 317 |

* Projected on basis of findings for sample canvassed.

TABLE 6

*Number and Per cent of Establishments Employing a Registered Nurse for In-plant Health Services, and Number Employed*

| Size of Establishment (No. of Employees) | Total No. of Establishments | Establishments with a Nurse | | No. of Nurses Employed | | |
|---|---|---|---|---|---|---|
| | | No. | Per cent | Full-time | Part-time | Total Hours per Week for Part-time Nurses |
| 50–99 | 349 | 0* | 0* | 0* | 0* | 0* |
| 100–249 | 201 | 6* | 3.3* | 2* | 4* | 18* |
| 250–499 | 61 | 8 | 13.1 | 4 | 3 | 24 |
| 500–999 | 33 | 14 | 42.4 | 14 | 8 | 100 |
| 1,000–2,499 | 17 | 13 | 76.5 | 23 | 2 | 10 |
| 2,500 or more | 9 | 16 | 66.7 | 27 | 0 | 0 |
| TOTAL........ | 670 | 47 | 7.0 | 70 | 17 | 152 |

* Projected on basis of findings for sample canvassed. Of 43 canvassed concerns with 50 to 99 employees none employed a nurse. Of 92 canvassed concerns with 100 to 249 employees, 1 employed a full-time nurse and 2 had part-time nurses.

Tables 5 and 6 show the number and per cent of establishments employing physicians and nurses, respectively. The proportion of organizations employing a physician ranged from 2 per cent among concerns with 100 to 249 employees to over 77 per cent among the very largest establishments. In all except 3 establishments only the part-time services of physicians were utilized.* Projecting the findings for the sample concerns to the total, it may be estimated that 30 concerns in the area employ physicians for the purpose of providing health services to employees and that 5 physicians were so employed full-time and 37 part-time.

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* In 2 or 3 cases these physicians were actually employed full-time but primarily for another purpose. However, they were available part of the time to provide health services to employees.

The average number of hours a week given by the part-time physicians was about 8. Of the full-time physicians, 2 each were employed by 2 very large organizations, i.e., having over 4,000 employees each; the other served a railroad employing many thousands, and only a small share of his time was available to the employees in the Washington area.

Forty-seven concerns in the area employ 1 or more registered nurses for in-plant health services. All told, 70 full-time and 17 part-time nurses were employed.* The nurses giving part-time service devoted an average of 8.6 hours per week to in-plant health duties. While they provided only part-time service, these nurses were actually full-time employees. They fell into 2 categories. Some were nurses who are primarily secretaries, receptionists, or clerks, and who provide health services to employees only when the occasion arises, or for a specified hour or 2 during the day. Others were nurses who are employed full-time at universities, schools, or hospitals, and who mainly serve students or patients, but some portion of whose time is given to service to employees. A few of the physicians shown as part-time are on the same basis.

Among the canvassed establishments with an in-plant health service, there was only 1 which employed a physician but did not employ a nurse. This concern was a chain store with numerous local units, each staffed by a few employees. The physician was utilized solely for preëmployment examinations. On the other hand, 17 concerns employed a nurse but did not employ a physician. In 1 or 2 of these concerns the nurse received some supervision and direction from the physician who was on call, on a fee basis, to provide service to injured employees. In some instances the nurse was supervised by a physician employed by the establishment for other purposes, e.g., in a hospital to serve patients, or in an insurance company to examine applicants for life insurance. In other instances, the nurse received no medical direction or supervision.

In smaller concerns the in-plant health service is typically staffed by a part-time physician, who spends 4 to 6 hours a week at the concern, and a full-time nurse. Only 1 instance was found in which a full-time nurse was employed where there were less than 250 employees. As the number of employees increases, additional part-time physicians and full-time nurses are employed.

## PREËMPLOYMENT EXAMINATIONS

In addition to inquiring about part- or full-time medical and nursing personnel, the survey sought to determine whether the organization had arrangements for preëmployment and/or periodic physical examinations for all or some groups of employees. Table 7 shows the findings on preëmployment examinations.

TABLE 7

*Number and Per cent of Establishments with Preëmployment Examinations for New Employees*

| Size of Establishment (No. of Employees) | Total No. of Establishments | Per cent of Establishments with In-plant Health Services | Establishments with Preemployment Examinations for All Employees | | Employees in Establishments with Preëmployment Examinations for All Employees | | Establishments with Preemployment Examinations for Selected Employees | |
|---|---|---|---|---|---|---|---|---|
| | | | No. | Per cent | No. | Per cent | No. | Per cent |
| 50–99 | 349 | 0 | 32* | 9.3† | 1,863* | 8.3† | 8* | 2.3† |
| 100–249 | 201 | 3.3 | 42* | 20.7† | 6,803* | 23.6† | 4* | 2.2† |
| 250–499 | 61 | 13.1 | 15 | 24.6 | 5,038 | 25.2 | 8 | 13.1 |
| 500–999 | 33 | 42.4 | 19 | 57.6 | 13,911 | 60.1 | 1 | 3.0 |
| 1,000–2,499 | 17 | 76.5 | 9 | 52.9 | 14,398 | 56.7 | 2 | 11.7 |
| 2,500 or more | 9 | 77.8 | 5 | 55.6 | 21,529 | 62.6 | 0 | 0 |
| TOTAL | 670 | 7.3 | 122 | 18.2 | 63,564 | 41.2 | 23 | 3.4 |

* Estimated, based on applying percentages for sample to total number of firms in this size group.

† Per cent found in sample canvassed.

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* Based on projections from the sample for concerns of less than 250 employees.

Of all concerns in the Washington area with more than 50 employees, 18.2 per cent, with 41.2 per cent of the total number of employees, have arrangements for preëmployment physical examinations on all new employees-to-be.

It will be seen that considerably more concerns, 122 as against 49, have arrangements for preëmployment examinations on new employees than have in-plant health services. An appreciable proportion of the smaller concerns, 9 per cent of those with 50 to 99 employees, and 21 per cent of those with 100 to 249 employees, had arrangements for preëmployment examinations. Very few of these concerns had in-plant health services. Among concerns with 250 to 1,000 employees, the proportion of those with arrangements for preëmployment examinations is somewhat higher than those with in-plant health services. On the other hand, among the very largest concerns employing 1,000 or more, those with in-plant health services outnumber those with arrangements for preëmployment examinations.

Where a concern employs a physician, part- or full-time, this physician will generally do the preemployment examinations. Concerns without their own doctor send the applicant to a designated physician or a clinic (usually clinics specializing in preëmployment or periodic physical examinations for employees and the treatment of work injuries*), which is generally paid on a fee basis. In most cases this physician or clinic will be the one to whom an injured employee would be sent for care.

An additional number of employers, about 23, employing approximately 7,300 workers, have arrangements for the making of preëmployment examinations on selected groups of new employees, typically truck drivers, bus operators, food handlers, and hospital nurses and attendants.

TABLE 8

*Establishments with Arrangements for Periodic Physical Examinations for All or Selected Groups of Employees*

| Size of Establishment (No. of Employees) | Total No. of Establishments | Per cent of Establishments with In-plant Health Services | Establishments with Periodic Physical Examinations for All Employees | | Employees in Establishments with Periodic Examinations for All Employees | | Per cent of Establishments with Periodic Physical Examinations for | |
|---|---|---|---|---|---|---|---|---|
| | | | No. | Per cent of Total | No. | Per cent of Total | Selected Groups of Employees Other than Executives | Executives |
| | | | | | | | Per cent of Total | Per cent of Total |
| 50–99 | 349 | 0 | 0* | 0† | 0* | 0† | 0† | 2.3† |
| 100–249 | 201 | 3.3 | 7* | 3.3† | 1,268* | 4.4† | 1.1† | 7.6† |
| 250–499 | 61 | 13.1 | 8 | 13.1 | 2,635 | 13.2 | 9.8 | 1.6 |
| 500–999 | 33 | 42.4 | 4 | 12.1 | 2,750 | 11.9 | 15.2 | 9.1 |
| 1,000–2,499 | 17 | 76.5 | 3 | 17.6 | 5,150 | 20.3 | 11.8 | 0 |
| 2,500 or more | 9 | 77.8 | 4 | 44.4 | 18,529 | 53.9 | 11.1 | 0 |
| TOTAL........... | 670 | 7.3 | 26 | 3.9 | 30,332 | 19.7 | 3.6 | 4.0 |

* Estimated, based on applying percentages for sample to total number of establishments in this group.

† Per cent found in sample canvassed.

PERIODIC PHYSICAL EXAMINATIONS

Table 8 shows the number and proportion of concerns which have arrangements for the provision of periodic physical examinations to all or selected groups of employees. By projecting the findings from the canvassed firms, it was estimated that 26 establishments employing 30,332 employees have arrangements for making periodic physical examinations on all employees. The percentage of firms with such arrangements ranged from zero in the smallest size group to 44 per cent among concerns of 2,500 or more employees. In general, considerably fewer concerns have such arrangements than have in-plant health services.

Most of the concerns which provide periodic physical examinations for all employees have in-plant health services, and the examinations are performed by the establishment's full- or part-time physician. In general, examinations of this type are not obligatory, but are voluntary. Generally, the examinations are performed every 1½ or 2 years.

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* There are in the Washington area approximately 6 clinics of this type. Most of these call themselves Workmen's Compensation Clinics, and their major activity is the care of work injuries for concerns too small to have a plant physician. Some of them apparently do a considerable volume of preëmployment and periodic examinations, especially for employees for whom such examinations are required by law, i.e., truck drivers, food handlers, barbers, beauticians, etc.

In addition to the 26 concerns which have periodic physical examinations for all employees, another 24 concerns (projecting the figures for the sampled groups), employing approximately 15,000 workers, have arrangements for periodic physical examinations for certain selected groups of employees, other than executives or supervisory personnel. These groups are mainly truck- and bus-drivers, food-handlers, and hospital nurses and attendants. One concern has periodic examinations for all employees who have been with it for over 5 years.

A small number of concerns, approximately 27, employing about 5,500 persons (these are projected figures) have arrangements for periodic physical examinations for executives and key personnel. All of the concerns with such arrangements had less than 1,000 employees. Generally, these examinations are performed by private practitioners, clinics or hospitals.

## Care of Work Injuries

In the early stages of the survey, concerns which did not have an in-plant health service were asked what arrangements they had for care of injured employees. Almost uniformly the reply was that they had a doctor on call in such cases, i.e., that they had in mind some physician to whom an injured employee would be sent, if the man was ambulatory, or who would be called to the plant if necessary. Such physicians would be paid on a fee basis, when, as, and if utilized. The arrangement simply meant that the employer had determined in advance the physician whose services would be sought. A fair number of employers stated that they made use of one or the other of the various compensation clinics referred to above.

## Manufacturing and Nonmanufacturing Industries Compared

The Washington Area has much less manufacturing than the typical city or state. Consequently, the question may arise as to how representative of other metropolitan areas or industrial states are the findings of this survey. A partial answer to this query is given by table 9, which compares the proportion of establishments in manufacturing and nonmanufacturing activities which have in-plant health services or arrangements for preëmployment and periodic physical examinations.

TABLE 9

*Per cent of Manufacturing and Nonmanufacturing Establishments Which Have In-plant Health Services and Preëmployment and Periodic Physical Examinations for All Employees*

| Size of Establishment (No. of Employees) | In-plant Health Services | | Preëmployment Physical Examinations | | Periodic Physical Examinations | |
|---|---|---|---|---|---|---|
| | Manufacturing | Nonmanufacturing | Manufacturing | Nonmanufacturing | Manufacturing | Nonmanufacturing |
| | Per cent | Per cent | Per cent | Per cent | Per cent | Per cent |
| 50–99 | 0 | 0 | 0 | 13.3 | 0 | 0 |
| 100–249 | 0 | 4.1 | 11.1 | 23.0 | 0 | 4.1 |
| 250–499 | 15.0 | 12.2 | 25.0 | 24.4 | 15.0 | 12.2 |
| 500–999 | 42.9 | 42.3 | 57.1 | 57.7 | 14.3 | 11.5 |
| 1,000–2,499 | 80.0 | 75.0 | 80.0 | 41.7 | 40.0 | 8.3 |
| 2,500 or more | * | 77.8 | * | 55.6 | * | 44.4 |

* There are no manufacturing establishments of this size in the area.

Surveys elsewhere have generally found that in-plant health services are more common in manufacturing than in nonmanufacturing industries, presumably hecause of the higher rate of work injuries and greater health hazards in manufacturing. The present survey does not bear this out. In general, there appears to be no significant difference between the two in this matter. However, among concerns of over 1,000 employees a distinctly higher proportion of the manufacturing than of the nonmanufacturing concerns had arrangements for preëmployment and periodic physical examinations.

## Summary

The proportion of nongovernmental establishments in the Washington, D.C. Metropolitan Area maintaining an in-plant health service varies from a negligible proportion among concerns of less than 250 employees to 13 per cent among concerns of 250 to 500 employees, 42 per cent of those with 500 to 1,000 employees, and over 75 per cent among concerns with more than 1,000 employees. Such services are virtually universal among concerns with more than 1,000 employees in which all or most of the employees are concentrated at one location.

Approximately 40 per cent of all employees of concerns with more than 50 employees work in organizations which have an in-plant health service.

Most concerns which have in-plant health services have arrangements for making preëmployment physical examinations on all applicants for employment. A substantive number of small concerns which do not have in-plant services also have such arrangements, the examination being performed by a private practitioner or clinic on a fee basis. Some concerns provide preëmployment examinations only on selected employees, such as vehicle operators and food handlers.

The proportion of concerns with programs of periodic physical examinations for all employees ranges from 3.3 per cent among those with 100 to 249 to almost half among concerns employing 2,500 or more employees. About 20 per cent of all employees in concerns with 50 or more employees are covered by such programs. An additional number of concerns provide for periodic physical examinations on selected groups of employees (mainly vehicle operators, food handlers, and hospital nurses and attendants), and some have programs of periodic physical examinations for executive and top supervisory employees.

Approximately 42 physicians, 37 part-time and 5 full-time, and 87 nurses provide service under in-plant health services in the Washington area.

A subsequent article will describe in some detail the in-plant health services of 12 concerns that were personally visited.

## JOINT ATTACK ON ASIAN INFLUENZA BY PHS AND AMA

Dr. Leroy E. Burney, Surgeon General of the Public Health Service, has announced that first supplies of a vaccine against Asian influenza are expected to become available to the public this month.

The 6 manufacturers licensed to produce influenza vaccine have set a production goal of at least 60,000,000 c.c. (doses) by February 1. This involves hiring additional personnel and operating 2 or 3 shifts, 7 days a week. They have reported that they expect to have about 8,000,000 c.c. available by mid-September, including about 4,000,000 c.c. ordered by the military.

The PHS will undertake a vigorous campaign to urge maximum public use of the vaccine just as rapidly as supplies become available. Dr. Burney noted it is quite possible, if not probable, that even with maximum use of the vaccine this country may have serious influenza epidemics in the fall or winter.

"There will not be enough time, of course, to produce and administer sufficient vaccine to immunize a majority of the population before the influenza season," he said. "But the vaccine is the only known preventive, and we want to make the best use of it we can."

The Public Health Service, the American Medical Association, and the State and Territorial Health Officers are planning a coöperative public information and education campaign on the nature of the disease and steps to be taken in the event influenza strikes. The AMA, working closely with the PHS, has developed a stand-by plan for the best use of available health and medical manpower in time of an influenza emergency.

Asian influenza is caused by a new strain of influenza virus which resulted in widespread epidemics affecting millions of persons in the Far East last spring. The new vaccine is a monovalent or single strain type designed specifically to combat this Asian strain.

Because this virus is a new strain, people have built no natural immunity to it. Thus it presents a special hazard. "We cannot be sure whether or when an epidemic may occur," Dr. Burney said, "but we should make all reasonable preparations."

There have been local outbreaks in the United States this summer, which normally is a season of low influenza incidence. Several thousand cases have been reported to date to the Public Health Service. Because of the nature of the disease—its swift onset and short duration—precise, up-to-the-minute reports on incidence are difficult to obtain. Other respiratory infections will occur which are virtually indistinguishable from influenza except by laboratory tests.

## READERSHIP SURVEY

Members of the Medical Society are urged to participate in a survey of reader interest in the Medical Annals. It is my hope that a large number of our members will fill out the form on page 41 of the Advertising Section in this issue and mail it to the Editorial Offices at 1718 M Street, N.W.

The results of this survey will be compared with those from other state medical journals; therefore, it will be most helpful if a majority of the members respond. Evaluations as well as constructive suggestions are invited.

The Editor

Most areas of the country have probably been exposed to the virus by now, and past experience suggests that the disease may suddenly begin to spread quite rapidly sometime in the fall or up through late winter.

Cases of Asian influenza so far have been marked by temperatures of 102° to 104° F, headache, sore throat, cough, and muscle aches. The fever lasts 3 to 5 days, followed by weakness for several more days. The attack rate in the Far East was approximately 20 per cent, with a death rate of about 0.2 per cent.

Assuming an attack rate of 10 to 20 per cent in this country, this would mean that in a city of 1,000,000 persons there could be 100,000 to 200,000 cases.

Past experience has indicated that a single injection of the vaccine will be about 70 per cent effective. Protection develops in 10 to 14 days and lasts approximately 1 year.

The precise cost of the vaccine to the individual has not been determined. In bulk military orders the cost was 20 to 40 cents per c.c. Retail prices, of course, may be somewhat higher. This price also does not include the cost of administering the vaccine.

As supplies become available to the public the PHS will recommend that particular consideration be given to the vaccination of those whose services are imperative for the care of the sick and those needed to maintain other essential functions.

The State and Territorial Health Officers and the AMA have jointly assured the Surgeon General that community resources, both public and private, will be mobilized to provide vaccinations for persons who are unable to pay for such protection.

The PHS has been in touch with the manufacturers of antibiotics, such as penicillin, and has recommended that they increase their supplies for use in fighting secondary infections arising from a possible epidemic. The antibiotics can be used effectively to combat pneumonia or other diseases which may strike as an aftermath of influenza, although they have no value in fighting the influenza itself.

Early in the Far East epidemic the Asian influenza virus was isolated by U. S. Army medical teams and shipped to this country for analysis. On May 22 the PHS sent prototype strains to licensed influenza vaccine manufacturers, and work was begun immediately on the development of a vaccine against the new strain.

The PHS continues to keep its epidemic intelligence services focused on influenza developments in this country and throughout the world, with particular attention to any indication of changing patterns in the severity or incidence of the disease. Clinical agents needed for diagnosis of Asian influenza are being produced and distributed, and PHS laboratories are investigating acute respiratory diseases. In addition, the Service is testing and evaluating the vaccine.

So far, Asian influenza cases in this country have been confined to relatively small groups, in contrast with the Far East experience in which epidemics spread rapidly throughout entire populations. States reporting some incidence of influenza are: California, Utah, Washington, Iowa, Kentucky, Louisiana, Pennsylvania, Rhode Island, New Mexico, Illinois, Minnesota, and Connecticut.

The licensed influenza vaccine manufacturers are Eli Lilly and Company, Lederle Laboratories, Merck, Sharp & Dohme, Inc., National Drug Company, Parke, Davis & Co., and Pitman-Moore Co.

# On the Lighter Side

September is an important month for fathers, mothers, and their bewildering progeny. School begins in September and the Johnnys and Marys have to be outfitted, newly shod, and cleaned up a little bit after a summer of playing in everything and everywhere.

The six-and-a-halfs and the sevens have to be led to the reading, writing and the rest of it with a firm hand on the arm, the ear, or the seat of the pants. Occasionally, when the offspring is willing, the leading can be done by the hand-in-hand technic. This latter phenomenon usually occurs when the willing offspring is a girl and the family budget has been dented severely to outfit her in the way she has always expected.

September is also an important month for the physician. First of all, with the cooler weather plus the end of summer vacations the doctor's life becomes a trifle complicated, what with the above Johnnys and Marys getting their physical examinations, their immunization shots, their teeth checked, and their I.Q.'s pigeon-holed. All of this makes for work.

Secondly, September has the magic to make the hospitals load up their attending staffs with committee meetings, departmental meetings, clinical meetings, hospital staff meetings, and the extra work associated with the hospital training programs for house staff officers. The specialty societies also begin to arouse themselves, along with other medical groups, by stirring up their fall and winter program of meetings. The Medical Society begins to unwind its medical mainspring and starts to tick. Its meetings begin. The parent groups, AMA, SMA, ACOG, AAGP, the American College of Physicians, the American College of Surgeons, et cetera, begin their final preparations for their convention meetings; and all the little offspring of such parent groups hold their own clinical meetings in between—just to show the P.G.s that they can do it too!

Thirdly, September brings to the just-broke medico (he spent all his ready cash on the family vacation!) an enormous batch of tax mail indicating that the third installment of you-know-what is due; and please deduct from all and sundry paychecks belonging to office help and assistants certain monies due. And if you do not have the time to do nor the knowledge of bookkeeping and accounting —why go out and hire somebody to do it, you lazy bum! You cannot expect the Government to do it all! After all, ole man, the Government has its hands quite full collecting, counting and spending your money! And anyhow, the Government doesn't trust the wage-earner to send his or her tax in to the tax collector; that is why you, the employer, must do it. Because, if the Government catches you in an error the take is better percentagewise—and why should the Government have to worry with all that old nasty work anyhow?

Fourthly, September gives to the empty-pocket practitioner a three-month's-eye-view of December, when all the tax business before mentioned has to be repeated, plus the pleasure of seeing all the outstretched open palms that are looking for something in the name of the natal day of the Prince of Peace.

But, September also gives us the wonderful excitement of the World Series in baseball; it gives us the opening of the football season with all of the thrills associated with it; it gives us the opportunity to watch the bangtails run during the new fall season; it gives us the new TV shows for what they are worth; it gives us the opening of the new season for bowling with all its attendant fun; it gives us the continuation of the finest fishing that the Chesapeake Bay and its tributaries have seen in many a moon; it gives us those glorious, cool sleeping nights and those warm days when a suit coat is comfortable and a topcoat too much. What more could you ask of any month?

Chuckle note: Anatomy: Something everybody has, but it looks better on girls. . . . Two secretaries were overheard discussing a new office machine: "I know that new electronic device does the work of three men," one observed sadly, "but personally I'd rather have the man.". . . There's nothing like marriage to break up a real good romance. . . . Just because your wife forgives you doesn't mean that she isn't going to tell you about it for the rest of your life!

(*Continued on page 516*)

# News and Personals

## MEETINGS

This issue of the Medical Annals features the District Medical Society's **26th Annual Scientific Assembly,** to be held at the Hotel Statler, October 14, 15 and 16. The scientific program and full details of the activities to be featured in connection with the Assembly are included in the special section, beginning on page 479.

**The Southern Medical Association** will convene for its **51st Annual Meeting** at Miami Beach, Florida, November 11–14.

Dr. George J. Stuart, Washington, Secretary of its Section on Allergy, has furnished a complete program for the Sectional meeting, November 11 and 12. Papers will be presented by Drs. William C. Grater and Charles B. Shuey, Dallas, Texas; Dr. Carroll M. Pounders, Oklahoma City, Oklahoma; Dr. Oscar Swineford, Charlottesville, Virginia; Dr. G. Estrade de la Riva, Havana, Cuba; Dr. John P. McGovern, Houston, Texas; and Dr. Arthur C. Curtis, Ann Arbor, Michigan.

Dr. Curtis will also be moderator for a panel discussion, November 12, on "Atopic Eczema." Dr. Walter Winkenwerder, of Baltimore, Maryland, will lead a panel discussion, November 11, on "Chronic Rhinitis." Another feature of the opening day is the Chairman's Address, by Dr. Cecil M. Kohn, of Kansas City, Missouri. The luncheon speaker the same day will be Mr. Bill Baggs, Editor of the *Miami Daily News*.

Initiating a new arrangement this year, the **Section on Gastroenterology** will hold all dinner meetings at the Kennedy-Warren Hotel. These will fall on the first Monday of alternate months beginning in October, with the exception of February, which will be a joint meeting with the Medical Society. This year Dr. Richard H. Marshak, of New York City, will discuss "Small Bowel Lesions" at the February meeting.

Speakers for the regular sessions will include out-of-town physicians of national reputation as well as local physicians and members with experience in the field of gastroenterology.

Medical Society members who are interested in gastroenterology and desirous of becoming members of the Section on Gastroenterology should address their inquiries to the Secretary-Treasurer of the Section, Dr. W. K. Billingsley, Jr., 1801 Eye Street, N.W.

## GENERAL NEWS

**The Executive Board of the Medical Society of the District of Columbia** held its first session under its new Chairman, Dr. Herbert P. Ramsey, July 22. Committee appointments which President Watts had submitted to the Executive Board for tentative approval at the June meeting were officially confirmed.

Dr. George Maksim was asked to represent the Medical Society at the Sixth National Conference on Physicians and Schools, sponsored by the Bureau of Health Education of the American Medical Association, to be held at Highland Park, Illinois, October 30–November 2, 1957. Dr. Maksim, who is Chairman of the Committee on Public Information and Education, was also asked to represent the Society at the AMA's Public Relations Institute, which was held in Chicago, August 28–29.

Dr. Zigmond M. Lebensohn, Chairman of the Committee on Mental Health, was appointed to represent the Society at the Fourth Annual Conference of Mental Health Representatives of the State Medical Associations, to be held November 22 and 23 at the Drake Hotel in Chicago.

Dr. Joseph S. Lawrence was appointed Chairman and Dr. Wallace M. Yater, a member of the newly created **Committee on Medical Philosophy.** These appointments, submitted by President Watts, were confirmed by the Board.

A letter from Miss J. Helen Rehm, Chairman of the National Membership Committee, American Association of Medical Assistants, which has no affiliate organization in the District of Columbia, was read to the Board. The Board voted to direct a communication to the members of the Society, enclosing literature pertaining to the organization of an affiliate of the AAMA and expressing its approval of the establishment of such an organization in the District of Columbia.

**The Board of Trustees of the American Medical Association** has announced two important changes in its administrative setup.

Dr. George F. Lull, who has been Secretary-General Manager of the Association for 11 years, has been elevated to the newly created position of Assistant to the President of the AMA. He will continue to serve as Secretary, which is an elective office.

Dr. F. J. L. Blasingame, of Wharton, Texas, has been appointed General Manager of the AMA. He will take over his new duties on January 1, 1958.

In his new role, Dr. Lull will relieve the President of the Association of many of the burdens of this office, which have become heavy in the last few years. Dr. Edwin S. Hamilton, of Kankakee, Illinois, Chairman of the Board of Trustees, enumerated some of his new duties as "spokesman, troubleshooter, listening post, information center, and ambassador of the medical profession in cities and towns throughout the country."

Dr. Blasingame has been active in medical affairs, both at the state and national levels, for many years. When the AMA's House of Delegates elected him to the Board of Trustees in 1949, he was one of the youngest physicians ever chosen. He has held many important AMA committee appointments, and he has represented the AMA abroad at several conferences of the World Medical Association.

He was President of the Texas State Medical Association in 1955. After graduating from the University of Texas School of Medicine at Galveston in 1928, he taught on the medical staff for 3 years and since then has maintained a teaching connection with the University of Texas.

Dr. Blasingame has also long been active in civic affairs, not only in his home town but throughout Texas. He is President of Blue Cross-Blue Shield Plans of Texas; Chairman of the Board of Trustees of Wharton County Junior College; and Chairman of the Medical Advisory Board of Sears, Roebuck Foundation.

**Dr. Eugene R. Chapin** is the new **Medical Director of the Civil Service Commission,** replacing Dr. Verne K. Harvey, who recently accepted an appointment with the Veterans Administration in Indianapolis, Indiana. For the past ten years, Dr. Chapin has filled the office of Assistant Medical Director.

A native of Meadville, Pa., Dr. Chapin is a graduate of the College of Medical Evangelists in California, where he received his medical degree in 1930. He began his Federal career with the United States Public Health Service in 1930 at the U. S. Marine Hospital in Key West, Fla. After six years' experience in various assignments with the PHS, he was detailed as a member of the medical advisory staff of the U. S. Employees Compensation Commission in 1936, becoming Assistant Medical Director of that agency in 1942. Two years later, he transferred to the staff of the Civil Service Commission's medical division, and was named Assistant Medical Director in 1946.

*Dr. Chapin*

**Dr. John J. Blasko,** formerly Commissioner of Mental Health for Connecticut, has been appointed **Chief of the Veterans Administration Psychiatry Division** in the Psychiatry and Neurology Service in Washington, D. C. He reported for duty, August 15, succeeding Dr. Stewart T. Ginsberg, who left VA in November to become Commissioner of Mental Health for Indiana.

Dr. Blasko was graduated from St. Louis University School of Medicine in 1935. He served as

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| June 11 | Dr. Bernard H. Ostrow | Hardening of the Arteries and The Nurse's Role in Care of the Patient | Undergraduate and Practical Nurses' Association of D. C. |
| June 13 | Dr. Marvin E. Perkins | How to Reach the "Hard to Reach" Boys and Girls | Leaders' Workshop, D. C. Recreation Department |
| June 26 | Dr. Anna Coyne-Todd | Sibling Rivalry | WTOP-TV, Donna Douglas Program |
| August 11 | Dr. Calvin T. Klopp | Cigarettes-Statistics-Cancer? | WTTG-TV, Georgetown University Forum |

Chief of Psychiatric Training at VA Central Office from 1952 to 1954; from 1947 to 1952 he was Director of Professional Education at the VA Hospital in Gulfport, Mississippi.

**The Washington Heart Association,** through the Chairman of its Research and Training Committee, Dr. John A. Reisinger, announced that 21 medical and premedical students of the District of Columbia were granted summer research fellowships by the Association this year. These fellowships, which consisted of a $600 grant for each student, made it possible for these young people to work in research laboratories in the District of Columbia under competent sponsorship during the summer months.

There follows a list of the students who participated in research projects at the three medical schools and D. C. General Hospital. Most of the research was concerned with atherosclerosis.

George Washington University: Rashid A. Abdu, John Blodgett, Arnold L. Case, Donald Castell, Isa Fawal, James Hastings, Larry B. Silver, William Skeen, John R. Wadleigh, and Paul Yen.

Georgetown University School of Medicine: Michael Ball, John E. Flanagan, Jerome Gorman, Stanley J. Majcher, and Joseph I. Paris.

Howard University School of Medicine: Joseph Anderson, Annette Franklin, Estelle Hughes, Russell Minton, and Robert A. Silva.

D. C. General Hospital: Richard Linde.

## PERSONALS

**Dr. Howard T. Karsner,** Medical Research Advisor to the Surgeon General of the Navy, has been elected Honorary President of the International Society for Geographic Pathology. The honor was bestowed upon Dr. Karsner at the Sixth Conference of the Society, held in Paris, France, July 9–11, 1957. This is a nongovernmental society whose aim is the study of relations which might exist between diseases and the geographical areas in which they occur. Dr. Karsner is an Associate member of the District Medical Society.

**Dr. Everett J. Gordon** conducted the annual physical examinations for members of the Washingron Metropolitan Police Boys Club prior to their annual summer encampment. Dr. Gordon, who is Medical Director of the Club, was assisted in the examinations by the Phi Delta Epsilon medical fraternity, who have set up this project as a memorial to his brother, the late Dr. Leon S. Gordon. The latter was the first Medical Director of the Police Boys Club.

**Drs. A. B. Irani, Jr., Leon A. Martel, Jr., Seamus P. Nunan, Joseph M. O'Neil, Meyer Rosenbaum, James G. Sites, Peter Soyster, and James C. Walsh** were certified by the American Board of Obstetrics and Gynecology on May 25, 1957. These physicians are all Active members of the District Medical Society, except Drs. O'Neil and Soyster, who are Associate members, and Dr. Rosenbaum, who is an Affiliate member.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**Surgeons All.** HARVEY GRAHAM, M.D. Foreword by Oliver St. John Gogarty. Price, $10.00. Pp. 459, with 29 illustrations. New York: Philos. Libr., 1957.

**Science Looks at Smoking. A New Inquiry into the Effects of Smoking on Your Health.** ERIC NORTHRUP. Introduction by Dr. Harry S. N. Greene, Chairman, Department of Pathology, Yale University. Price, $3.00. Pp. 190. New York: Coward-McCann, Inc., 1957.

**Dermatologic Formulary,** 2nd ed. From the New York Skin and Cancer Unit, Service of Dermatology (Dr. Marion B. Sulzberger, Director). Revised, 1957. FRANCES PASCHER, M.D., Editor. Price, $4.00. Pp. 172. New York: Hoeber-Harper, 1957.

**An Atlas of Cardiac Surgery.** JORGE A. RODRIGUEZ, M.D., Assistant Professor of Surgical Anatomy and Research Associate, Department of Surgery, University of Mississippi Medical School. Price, $18.00. Pp. 250, illustrated. Philadelphia: Saunders, 1957.

**Foot Troubles.** T. T. STAMM, F.R.C.S. Price, $4.75. Pp. 122. New York: Philos. Libr., 1957.

**Psychosomatic Medicine. A Clinical Study of Psychophysiologic Reactions,** 3rd ed. EDWARD WEISS, M.D., Professor of Clinical Medicine, Temple University Medical Center, Philadelphia, AND O. SPURGEON ENGLISH, M.D., Professor and Head of Department of Psychiatry, Temple University Medical Center, Philadelphia. Price, $10.50. Pp. 557, with 8 figures. Philadelphia: Saunders, 1957.

**Ciba Foundation Colloquia on Ageing. Volume 3. Methodology of the Study of Ageing** G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.CH., AND CECILIA M. O'CONNOR, B.SC., Editors for the Ciba Foundation. Price, $6.50. Pp. 202, with 47 illustrations. Boston: Little, 1957.

## JOSEPH J. MCHALE, B.S., M.D.
## (1899-1957)

Dr. Joseph J. McHale, a practicing physician in the Washington area for more than 30 years, died suddenly, August 3, 1957, in his apartment at 3051 Idaho Avenue, N.W.

Dr. McHale was born in Pittston, Pennsylvania, June 9, 1899, to Patrick J. and Mary McNulty McHale; the latter survives him. The family moved to the Far West, and Dr. McHale received his early education in the schools of Butte, Montana, and at Gonzaga High School in Spokane, Washington. He returned to the East for his premedical and medical training, receiving both his B.S. and M.D. degrees from Georgetown University, the former in 1922 and the latter in 1924. He interned at Georgetown Hospital the following year and served as resident physician at Columbia Hospital for Women in 1925–26.

Dr. McHale had offices at 25 West Glebe Road, Alexandria. For many years his offices had been located in the Farragut Medical Building in Washington.

He was on the staffs of Georgetown, Columbia, and D. C. General Hospitals for many years. He had served on the faculty of Georgetown University School of Medicine as a teacher of physiology, medicine, and later clinical gynecology.

Dr. McHale was for many years an Active member of the District Medical Society. He was a member and Past President of the Georgetown Clinical Society and a member of Phi Beta Pi medical fraternity. He also held membership in the Columbia Country Club. He was a veteran of World War I.

In addition to his mother, he is survived by his wife, Mrs. Miriam McCarthy McHale. He leaves a daughter, Mrs. Miriam Flinn, of New York; two sons, John and Joseph McHale, of Washington; and a sister, Mrs. Stasia Griffin, of Fairlington, Virginia.

### Pulmonary and Cardiac Function Tests—Harden et al

(*Continued from page 456*)

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3. Taylor, W. J., Petter, J. B., and Whittenberger, J., L.:Ibid., 1955, **72,** 453.
4. Landis, F. B., and Weisel, W.: J. Thoracic Surg., 1954 **27,** 336.
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9. Etsten, B. E., Overholt, R. H., Walker, J. H., and Reynolds, R. N.: New England J. Med., 1953, **248,** 81.
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12. Mannix, E. P., Jr., and others: S. Forum (1950), 1951, pp. 33–40.
13. Douglass, R., and Bosworth, E. B.: Am. Rev. Tuberc., 1954, **69,** 930.

### Chlorothiazide (Diuril)—Freis and Wilson

(*Continued from page 468*)

and hydralazine appear to be less critical in order to obtain a sustained antihypertensive effect than without chlorothiazide. This simplification of dosage adjustment plus the low incidence of disturbing side-effects makes this method of treatment especially useful in general practice.

Chlorothiazide has not yet been released for general use. If further clinical investigation confirms the absence of toxicity and continued effectiveness, the drug should represent a valuable addition to our therapeutic armamentarium.

### Congenital Malformations of Heart—Gilbert and Wedum

(*Continued from page 478*)

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267. Heath, D., Whitaker, W., and Brown, J. W.: Ibid., 1957, **19,** 83.
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270. Dresdale, D. T., Schultz, M., and Michtom, R. J.: Am. J. Med., 1951, **11,** 686.
271. Leatham, A., and Vogelpoel, L.: Brit. Heart J., 1954, **16,** 21.
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273. Cutler, J. G., and others: Am. J. Med., 1954, **17,** 485.
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276. Brewin, E. G.: Guy's Hosp. Rep., 1956, **105,** 328.
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### On the Lighter Side—Kadan

(*Continued from page 511*)

Sobriety note: One of the best tests of a true gentleman is his respect for those who can be of no possible use to him.

J. Earl Kadan, M.D.

# Book Reviews

**The Clinical Management of Varicose Veins,** 2nd edition, revised and enlarged. David Woolfolk Barrow, M.D. Price, $6.00. Pp. 169, with 70 illustrations. New York: Hoeber-Harper, 1957.

The treatment of varicose veins has changed materially in the last 30 years. The re-introduction in the mid-twenties of the injection of sclerosing solution in the treatment of varicose veins was greeted with an enthusiasm which was soon dampened by frequent recurrences and continuing development of new varices. The types of ligations and their indications have changed substantially with better understanding of the hemodynamics of the venous circulation of the legs.

Dr. Barrow has limited this discussion of theoretical and controversial matters. The chapters on the anatomy, physiology, pathology and examination, including diagnosis, lay a concise, objective foundation for the later chapters on treatment. An obvious virtue of this book is that it is based on the large personal experience of Dr. Barrow.

The book is short enough to invite its perusal by any surgeon or student. It is thoroughly readable and can be recommended as bedside reading. The text and format are such that it can be read with interruptions and yet lose little or no meaning. The illustrations, especially the diagrams, are excellent. Dr. Barrow's book belongs in the library of any surgeon who treats varicose veins.

F. C. Fishback, M.D.

**Textbook of Pathology with Clinical Applications.** Stanley L. Robbins, M.D. Price, $18.00. Pp. 1351, with 933 figures. Philadelphia: Saunders, 1957.

The author of this textbook of pathology is the Associate Professor of Pathology at Boston University School of Medicine, and the Associate Director of the Mallory Institute of Pathology in Boston.

Dr. Robbins has produced a volume of 1,351 pages which is primarily designed as a textbook of pathology. The book is ideally suited to students of pathology in medical school but is adaptable as a ready reference for physicians in practice. The author's approach to the subject is a logical one, with an orderly development of the subject from the normal tissue through the abnormal tissue, with explanations of the pathologic process, not only from the point of view of morphology but from the dynamic pathologic aspects.

The author emphasizes the fact that it is his earnest desire to impress upon the reader the dynamism of the pathologic process, and the absence of any static qualities in the development of disease. He therefore has correlated many clinical pathologic problems with the pathologic process and accompanies the text with numerous well chosen, clear-cut black and white photographs, with an adequate distribution of gross and microscopic pictures. In some instances the author has selected typical clinical cases which illustrate the problem of pathology and its dynamic quality in a clear, distinct fashion.

The discussion of basic pathology initiates the first few chapters while discussion of disease entities in particular organs follows in later chapters. At no time does the author attempt to recapitulate the basic pathology other than to refer to the pathologic process as it applies directly to the organ involved. The text is thorough and covers subjects adequately, with separate chapters on skin, mouth and central nervous system pathology, which sections are frequently left out of average textbooks. It is fair to say that the author has combined the clarity of language that is typical of McCallum's text, while the organization of logical sequence imitates some of the characteristics of Moore's text.

One deficiency which may be ascribed to the lack of space is the fact that relatively few references are given following each chapter. These references, however, indicate articles which are classical ones referring to particular disease entities described within the previous chapter.

All in all, the book is a very satisfactory textbook of pathology, and offers many advantages over those previously published. There are many new ideas which are included to keep the textbook current to modern pathology, and the fact that the fresh clinicopathologic approach is assumed offers much to the benefit of the reader in his peregrinations through this book.

Oscar B. Hunter, Jr., M.D.

**Dorland's Illustrated Medical Dictionary,** 23rd edition, Including Modern Drugs and Dosage by Austin Smith, C.M., M.D., Editor, *Journal of the American Medical Association* and Fundamentals of Medical Etymology by Lloyd W. Daly, A.M., Ph.D., Associate Professor of Classical Studies, University of Pennsylvania. Editorial Board: Leslie Brainerd Arey, Ph.D., Sc.D., LL.D., William Burrows, Ph.D., J. P. Greenhill, M.D., and Richard M. Hewitt, A.M., M.D., Price, $12.50. Pp. 1598, with more than 700 illustrations and 50 plates. Philadelphia: Saunders, 1957.

The arrival of a new dictionary in an editorial office is always an exciting event; this is particularly true when the dictionary is a medical one and the new edition is Dorland's.

Among the list of consultants and contributors to this edition, it is pleasing to note the names of two members of the Medical Society of the District of Columbia, Dr. Edward J. Stieglitz, Consultant in Geriatrics to Veterans Administration and St. Elizabeths Hospital, and Dr. Henry P. Laughlin, Associate Clinical Professor of Psychiatry, George Washington University School of Medicine.

## Book Reviews

(*Continued from page 43*)

The first edition of Dorland's was published by Saunders in 1900. Since then editions have come out every 2 years, later every 3 years, and this particular edition comes to us after an interval of 6 years. Dr. W. A. Newman Dorland, Editor of each of the 22 preceding editions, died in September 1956. Dr. E. C. L. Miller, who in 1923 became a significant contributor to the dictionary, died in July 1954. In the Preface, the publisher credits these two physicians with preparing the groundwork for the foundation upon which future achievements of the dictionary will rest.

The dictionary includes brief sketches on classic names from the early history of medicine and men whose names have been given to various diseases, procedures, and the like. The addition of men of this century is limited to those who have received world-wide recognition as Nobel Prize winners.

This reviewer finds Dorland's a particularly satisfactory reference work because abbreviations and biographical sketches are included in one comprehensive listing. At the back of the volume are two fine sections, which were introduced in the previous edition, the table of Modern Drugs and Dosage, prepared by Dr. Austin Smith, Editor of the *Journal of the AMA*, and Fundamentals of Medical Etymology by Professor Lloyd W. Daly. A new feature of this volume is Notes on its use. Like previous editions, the book is very well illustrated.

The alphabetical listing begins with A, the chemical symbol for argon, and closes with Z. Z.′ Z.″—"increasing degrees of contraction," and in accord with its closing entry, the 23rd edition, as compared to the 22nd, has contracted to the extent of 138 pages.

A. L. E.

**Therapeutic Exercise for Body Alignment and Function.** Marian Williams, Ph.D., and Catherine Worthingham, Ph.D. Exercise illustrations by Harold Black. Price, $3.50. Pp. 127. Philadelphia: Saunders, 1957.

This book is a reference manual written by 2 well qualified physical therapists. It is similar in style and appearance to a manual on muscle testing which also bears their names.

Posture and alignment of the body and its segments are discussed and evaluated. Methods of recording normal and abnormal findings are described. The therapeutic exercise program and principles of treatment are presented. The authors emphasize improvement of body alignment resulting from a relationship between therapist and patient. Their description of exercise technics is excellent.

It is important that the physician realize that deviations in general or segmental alignment are often effects of serious illness and that there is no substitute for

(*Continued on page 45*)

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## Book Reviews

(*Continued from page 44*)

complete and thorough medical evaluation and diagnosis. Following this effort, the book can be helpful to assist the physician in prescribing appropriate exercises for his patient.

The book is superb in its presentation of technics by diagram. Each chapter contains a bibliography. There is an appendix which describes and illustrates muscles of primary concern in body alignment and function.

This manual reflects great credit on its authors and will be most useful as a reference work for physicians who prescribe therapeutic exercises and for therapists in every stage of their career.

CHARLES D. SHIELDS, M.D.

**Ciba Foundation Symposium on the Nature of Viruses.** G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., B.CH., AND ELAINE C. P. MILLAR, A.H.W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $8.00. Pp. 292, with 57 illustrations. Boston: Little, 1957.

The Nature of Viruses is the publication of a Ciba Foundation Symposium held in London in March of 1955 on the biochemistry and biophysics of viruses. It was an International Symposium but most of the participants were from the United States of America or Great Britain. The published edition of this symposium includes references to work published subsequent to the time of the symposium and is an up-to-date report on current research on certain aspects of plant, bacterial, and animal, including human, viruses. There are excellent discussions of what is known about such fandamental properties as their physical structure, their biochemical composition, the quantitative aspects of their growth, the morphologic changes they produce in infected host cells, and the antigens produced by their reproduction.

The book is not a complete summary of current knowledge of viruses nor a synthesis of the various segments of virus research, and is unsatisfactory as a textbook on even the subject of its subtitle, The Biophysics and Biochemistry of Viruses. The physician looking for information that he can relate to clinical problems in virus diseases will find only a few articles that might help him. One of these is Sven Gard's on the chemical inactivation of viruses, that should be adequate introduction to the difficulties encountered in producing an inactivated (killed) vaccine for poliomyelitis. The thoughtful physician may similarly be interested in the fascinating articles of F. K. Sanders and F. B. Bang on the mechanisms by which such minute agents as viruses with such limited functional activities are able to invade, propagate in and destroy normal (human) tissues. Aside from these articles this excellent monograph would seem to be of interest to only those people actively working in the laboratory on studies of viruses.

JOHN P. UTZ, M.D.

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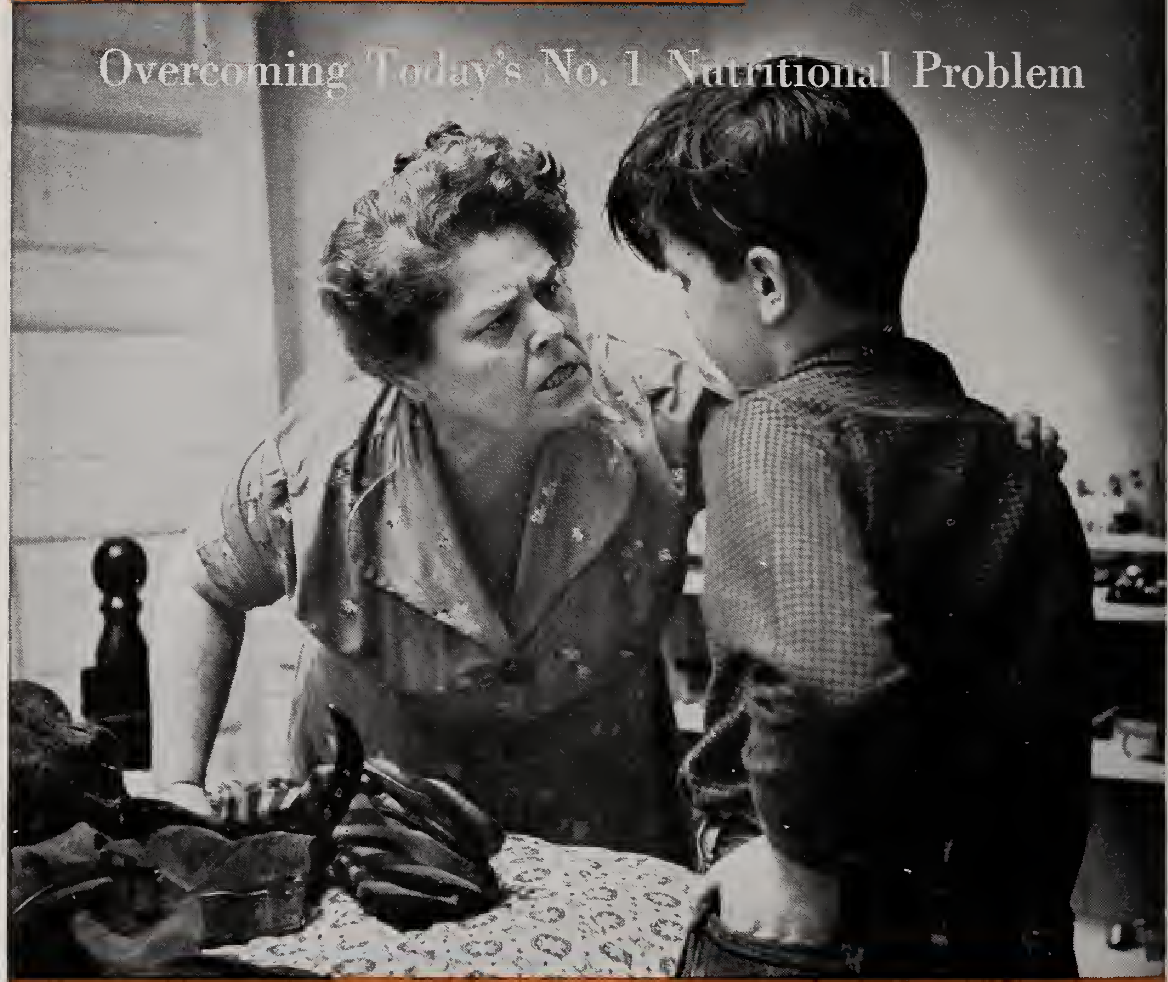
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[1] The Food Exchange Lists referred to are based on material in "Meal Planning with Exchange Lists" prepared by Committees of the American Diabetes Association, Inc., and The American Dietetic Association in cooperation with the Chronic Disease Program, Public Health Service, Department of Health, Education and Welfare.

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MEDICAL ANNALS
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VOLUME XXVI *October*, 1957 NUMBER 10

# MODERN SURGERY OF ADVANCED PULMONARY TUBERCULOSIS

JOHN J. NOLAN, M.D., F.A.C.S.
*Instructor in Thoracic Surgery, Georgetown University School of Medicine*

THE EARLY and the late results of the surgical treatment of pulmonary tuberculosis have improved spectacularly since the introduction of streptomycin, para-amino salicylic acid, and isonicotinic acid hydrazide as specific antimicrobial agents. Prior to the introduction of these drugs, which appeared first about 10 years ago, the surgery of choice in tuberculosis had been thoracoplasty. This had been a frustrating state of affairs, because every variety of lung resection had been satisfactorily applied to the surgical management of nontuberculous pulmonary disease. Although thoracoplasty is an indirect operation on the chest wall, and although it leaves the tuberculous lung focus in situ, the incidence of late operative morbidity and mortality had been low, and the operation had been yielding a respectable percentage of satisfactory late results. Better control of the disease-producing mycobacterium, with specific antimicrobial agents, finally permitted the application to tuberculosis of accurate excisional technics. Bailey et al[1] first emphasized the lessened morbidity and mortality in a large series of cases, 100 without antimicrobials and 100 with antimicrobials. As the other agents and longer term therapy have been added, mortality and morbidity of intrapleural operations have continued to decline.

A brief history follows, tracing the development of resectional surgery for tuberculosis, and attempting to credit the ideas and concepts which finally permitted its realization. Also presented is a personal series of 31 resections for tuberculosis performed in an institution devoted to the care of tuberculosis alone. These resections included 5 pneumonectomies, 16 lobectomies, 5 segmental resections, and 5 wedge resections, with no operative mortality. A follow-up of 2½ to 3½ years is now available on these patients, operated upon between June 1953 and June 1954 at the Veterans Administration Tuberculosis Hospital in Brecksville, Ohio. Since that time 10 additional lobectomies have been accumulated in private hospitals in the District of Columbia with no operative mortality and no late mortality.

## HISTORY OF OPEN CHEST SURGERY

The observation that pulmonary tuberculosis in the adult often would localize into the apices of the lung, there to come into a prolonged though tenuous equilibrium with the host, produced the stimulus to remove surgically the offending focus. Sporadic removals of expendable units of lung tissue were made as long ago as 1884, when, according to Gustav Lindskog,[2, 3] Ruggi performed the first resection for tuberculosis. The attempt could be made only on patients with an obliterative pleuritis, which would serve to stabilize the mediastinum and prevent a complete pneumothorax. Such conditions were met infrequently; surgeons of necessity confined themselves to the abdomen, a serous cavity which could be opened with impunity once asepsis and anesthesia had been developed. Indeed the situation was such that in 1903 Von Mikulicz could still say to Sauerbruch,[4] "Hundreds of thousands of people are succumbing to tuberculosis, because as yet no one has been able to operate inside the thorax." Any widespread application of open chest surgery for tuberculosis, or for any thoracic disease, awaited the birth of ideas and the laborious testing of those ideas to find out whether they were fact or fantasy. First was needed an idea of how to overcome the almost uniformly fatal physiologic alterations produced by exposing to atmospheric pressure the elastic and collapsible lung; second, the anatomical knowledge needed to outmode mass tourniquet ligation of hilar structures in favor of the individual, meticulous closure of artery, vein, and bronchus; third, the development of safety in blood transfusion, permitting the restoration or maintenance of blood volume and circulating red blood cell mass, a *sine qua non* of thoracic surgery; and fourth, the discovery of drugs which would prevent the tubercle bacillus from producing postoperative spreads, empyemas, and dissolution of bronchial closures into bronchopleural fistulas.

Early attempts at transpleural operations in the laboratories upon animals were very discouraging. Open pneumothorax was promptly lethal in the dog (Sauerbruch). The elastic lungs collapsed, and the fatal effects of this upon cardiac intake and output and upon ventilation of the blood by the atmosphere were soon common knowledge serving to discourage clinical attempts to operate in the open chest. Sauerbruch's cabinet[5, 6] was the first widely applied idea of how to keep the lungs expanded, by enclosing the opened chest and the operating team in a cabinet under negative pressure, leaving the patient's head exposed to the atmosphere through an opening which was airtight. Thus, Sauerbruch was able to prevent pulmonary collapse, and in turn to avoid the rapid development of serious trouble. However, the volume of alveolar ventilation still depended upon rhythmical fluctuations of pressure within the airways, and the static cabinet pressures did not provide these fluctuations. Effective ventilation was still so severely compromised that asphyxia was only delayed, not eliminated.

These facts gave impetus to extrapleural, compromise procedures of dealing with the tuberculous lung, and collapse technics became the vogue. When these decostalizing procedures were staged in such a manner that the cardiopulmonary reserve was never seriously dissipated by excessive paradoxical motion, operative deaths were minimized. The collapsed lung foci healed, for reasons still incompletely known, often enough that thoracoplasty of a selective type became the surgery of choice for decades. Little by little, however, the veil of mystery was being stripped from the effects of open pneumothorax. New concepts, new ideas came forward. In 1909, Meltzer and Auer[7] described how they had been able to keep dogs and rabbits alive by a stream of oxygen delivered to the bifurcation of the trachea at a pressure 20 mm. above that of the atmosphere. They emphasized the necessity of a circuit of air, carrying carbon dioxide back out of the ventilated alveoli through the channels around the loose-fitting endotracheal tube. They also pointed out that if this detail of permitting escape of large volumes of gas from the lungs was ignored, the animal soon died of asphyxia no matter how much oxygen was supplied to it. The rather dramatic title of the report was "Continuous Respiration without Respiratory Movements." It was widely read and widely known, but in applying the endotracheal tube to clinical problems, one detail or another was often ignored, to the detriment of the patient. One false concept which seems to have emerged from this early animal experimentation is that the only vital function of the lungs was to add oxygen to the bloodstream. The correct concept, which has now been fully tested and documented both in the operating room and in the laboratory (Gibbon,[8] Crafoord,[9, 10] Allbritten,[11] Comroe,[12] Beecher[13]), is that the lungs are the most important organ in the body for acid excretion, and that this excretory function can be preserved only when ventilation rather than oxygenation becomes the object of the method of combating pneumothorax.

To emphasize the importance of the lungs as organs of toxic acid excretion, Comroe[12] has compared them with the kidneys, as follows: Milliequivalent of volatile acid for milliequivalent of fixed acid, the lungs excrete in 5 minutes the equal of the entire daily output of the kidneys. This vital function of the lungs has tended to be overlooked in the anxiety to provide equally vital oxygen. Higher and higher oxygen concentrations have been the aim. This has eliminated cyanosis as an indicator of hypoventilation; carbonic acid has been shown to reach astonishing levels in the arterial blood during chest surgery. Gibbon,[8] who originated the research into the "heart-lung" machine in 1939, soon became acutely aware of this ironic situation of carbonic acid retention. It is emerging more and more as an occult contributor to cardiac arrest, which is almost never seen with anatomically normal hearts when the $pCO_2$ is kept normal. It may be said now that the excretory function of the lungs is best preserved by adequate alveolar ventilation, vital to the delivery of carbon dioxide from the alveoli to the soda-lime cannister for elimination. Crafoord[9], in 1938, also had emphasized the paramount importance of dynamic, rhythmical, pressure fluctuations for maintenance of ventilation. Gibbon[8] and Allbritten[11] made this an easy matter to accomplish. They designed a positive-negative ventilating machine for the purpose. It ventilates the blood satisfactorily even in a patient with severe emphysema, a condition which greatly increases the risk of endotracheal anesthesia and "controlled respirations." Normal pressure gradients in the cardiovascular and ventilatory pathways are so closely simulated that the most prolonged procedures in the open chest result in little or no disturbance of homeostasis. Modern, balanced, anesthetic drug administration and normal ventilation of the blood are thus combined in yielding a desired excellent result.

The pioneer surgeon who was courageous enough to attempt pulmonary resection found himself working against the clock, since the mortality rate of hypoventilation varied directly with the time the chest was open. The time-consuming technics necessary to perform an anatomical dissection of the hilar components of pulmonary artery, pulmonary vein, and bronchus were unthinkable at the stage of development when methods of ventilating were poorly understood. In 1933 Evarts Graham[14] performed the first successful one-stage pneumonectomy by a technic which would be unthinkable today. A tourniquet was used to secure the root, at that time, of any lobe or lung to be removed, into a mass of crushed tissue. The bronchus showed a strong tendency to reopen during the postoperative period, and the incidence of bronchial fistula and empyema was high. The individual ligation technic for performing lobectomy was finally demonstrated to be practical in the reports of Blades and Kent[15] in 1940 and of Kent and Blades[16] in 1942. The logical extension of these technics to segments, rather than lobes, established the segments as surgical units for excision in suitable cases.

Anatomic and temporal roadblocks to precise removal of diseased lung were overcome.

Following the practical solution of the problems of anatomy and ventilation, the longer and more extensive operations now being performed were found by experience to result in very large losses of blood. This loss occurred despite meticulous technic in hemostasis, reflecting the magnitude of the operative procedures. This was a stimulus to study the transfusion of blood on a scale never previously required. The second World War accelerated research in this field, and it is common knowledge how well the requirements for safe transfusion have been met. Brecher's monograph[17] on venous return presents the physiologic facts which justify the employment of transfusion in most thoracic surgical procedures. It emphasizes the effect of "controlled respirations" and positive pressure ventilation upon venous return. When the chest is still closed there is considerable damming back effect, interfering with cardiac intake. The hypovolemic patient is unable to mobilize enough blood to maintain cardiac intake in the face of increased vena caval pressures. The venous reservoirs, from which such a mobilization has been shown to take place, are depleted in the hypovolemic patient, who then promptly goes into shock when "controlled respiration" is employed. In addition to blood transfusion, the positive-negative ventilator has also been found to be very useful in this phase of the problem. The alternating pressures above atmospheric and below atmospheric promote venous return, which is in essence cardiac intake, and which becomes cardiac output.

In 1944, when streptomycin was discovered, pulmonary resection had been achieving recognition as safe, standard procedure in nontuberculous chest disease, owing to the solution of the anatomic and physiologic problems involved. However, its application to tuberculosis was being compromised by a high incidence of postoperative spread or reactivation of disease, bronchopleural fistula, and empyema. Based upon experience during these frustrating years, Sweet[18, 19] had twice published reports condemning pulmonary resection in tuberculosis. He made a very prophetic statement, however, when he also said that these postoperative complications would disappear as soon as effective agents were at hand to control the tubercle bacillus, and to prevent it from producing delayed dissolution of bronchial closures. As soon as streptomycin had been joined by para-amino salicylic acid in 1948 and isonicotinic acid hydrazide in 1950 the answer to the necessary prolonged control of the bacillus was found in the synergistic effects of combinations of 2 or more of these agents. With this last addition to the armamentarium the status of resectional surgery as the surgical therapy of choice for pulmonary tuberculosis had at long last become assured.

## The Surgical Candidate

The patients who will require surgery may be expected to emerge from those whose disease had become advanced prior to the institution of treatment. A percentage figure cannot yet be given. Of the 29 patients in this series (2 patients had 2 resections each), 16 were classified as having moderately advanced disease at the time of diagnosis. The extent of the necessary resection is always directly related to the irreversible changes which have taken place in the pulmonary parenchyma before healing is induced by therapy. Under the influence of drugs the acute and subacute components of the granulomatous process will subside, but the chronic component will very often leave a residual focus, the stability of which is dubious at best. Residual cavitation, bronchiectasis, lower lobe foci, destroyed lung, and bronchostenosis are examples of irreversible changes necessitating surgical intervention.

## Choice and Timing of Procedure

The decision as to who will need surgery is best made after a period of optimum treatment and observation. The "target point" in the surgical candidate is reached when serial roentgenograms show no appreciable further improvement in the acute and subacute components of the disease. The resectional procedure is ideally performed within the golden period of maximum bacterial susceptibility.

The high stage of development of modern thoracic surgery permits precise removal of focal chronic tuberculosis with little sacrifice of pulmonary parenchyma that had not been involved in the disease process. For example, it is possible to remove any of the 4 segments of the left upper lobe or any of the 3 segments of the right upper lobe, preserving the uninvolved segments to contribute to the patient's cardiopulmonary reserve. Chamberlain[20] has demonstrated that the mortality and morbidity of segmental resection, with meticulous technic, is no higher than the mortality and morbidity of lobar resection. Leaving healthy parenchyma in situ will be rewarded by a furtherance of the patient's life expectancy. A resection, even more conservative than that of a segment, is wedge resection. This very simply excises, without any hilar dissection, a peripheral focus of disease from its subpleural location. Its applicability, unfortunately, is limited to those few foci which have no significant extension toward the root of the segment in which they lie. When the focus of disease extends proximally along the bronchus toward the point at which it branches from the secondary bronchus, an anatomic removal demands that the whole arterial and bronchial unit be painstakingly excised by the operation of segmental resection. Lobectomy and pneumonectomy are necessary when the irreversible destruction by the disease prior to therapy has involved multiple segments in a lobe, necessitating lobectomy, or so many segments of a lung that the entire lung must be removed. The "salvage" case is a particularly high risk type of patient in whom surgical resection represents the last chance for conversion of positive sputum, and for possible rehabilitation.

In the more severe risk categories of patients the question naturally arises, "Can this patient withstand the amount of resection of lung tissue necessary to remove his chronic unstable tuberculosis and still be left with enough cardiopulmonary reserve that he will not be crippled?" Many tests of pulmonary function have been devised in an effort to reduce this question to ready answerability. Since the resection removes both ventilatory and circulatory reserve, it is impractical to perform completely satisfactory tests. The common ventilatory and oxygen consumption tests are highly accurate in rejecting the hopeless risk and in accepting the good risk but are often equivocal in appraising the less sharply defined candidates. However, in general, the absence of emphysema implies the ability to withstand extensive pulmonary resection without cardiac or pulmonary crippling. This concept is illustrated by case 1.

**Case 1.** P. L., a 36-year-old white man, had been admitted to the sanatorium with far-advanced pulmonary tuberculosis. A spontaneous bronchopleural fistula developed on the left, resulting in a mixed empyema. At the time of open drainage of the empyema the patient was emaciated and moribund. Once the empyema had been drained he made a remarkable recovery and, with the help of PAS and INH, improved to the point where the sputum became negative and his disease stabilized. In an effort to decide whether he could withstand removal of the destroyed left lung, spirometry and bronchospirometry were performed. Vital capacity was 1,900 c.c., but timed vital capacity revealed absence of air trapping, 93 per cent of the air being delivered in 3 seconds. Maximum breathing capacity was 64 liters per minute. Oxygen uptake, however, was being accomplished entirely by the right lung, and the left lung was therefore nothing but "dead space" as far as function was concerned. On August 5, 1953 left pneumonectomy and a 7-rib thoracoplasty were accomplished. The patient did quite well clinically. Repeat pulmonary function studies 4 months postoperatively revealed no loss of function despite the pneumonectomy and thoracoplasty on the left side. The patient remains well and at work more than 3 years later.

The apparent poor risk patient will do very well in the absence of emphysema and when the contemplated resection will remove only destroyed lung which is making no contribution to function.

The choice of the candidate and of the proper resectional procedure must be supplemented by timing the resection to take place during the period of anticipated maximum susceptibility of the bacillus to the standard drug combinations. Ideal timing of surgical intervention appears to be approximately 6 months following the initiation of drug therapy. This interval permits satisfactory healing of the reversible disease, and yet permits resection to be done at such time as the bacillus is still maximally susceptible to the therapeutic chemicals. Proper technic gives excellent assurance of favorable bronchial healing and the prevention of late reactivation, bronchopleural fistulae, and empyemas. This ideal timing is not always feasible. Interrupted treatment courses and bilateral advanced disease are only 2 of the factors which may delay the resection beyond the optimum period. Fortunately, the emergence of resistant bacilli may be so delayed as to make resection still the operation of choice. However, with the emergence of bacilli resistant to all available drugs, the old hazards of resection, viz., bronchopleural fisulae, empyema, and "spread" or reactivation of disease, became distressingly frequent. When the residual disease focus is of the type amenable to thoracoplasty and the organisms in the sputum are resistant, this largely outmoded operation may still have an indication, even today.

## Results of Modern Treatment

Everyone is hoping that the results of the modern treatment of tuberculosis, combining medicine and surgery, will remain as incredibly good as they appear now. The antimicrobials have made a revolutionary change. The patients leaving the hospital following resectional surgery for far-advanced disease have been evidencing a relapse rate of 5 per cent or less and almost negligible relapse rate with moderately advanced disease. As might be expected, the outcome of pulmonary resection is best when the disease at the time of diagnosis has not progressed beyond the moderately advanced stage. Faithful adherence to a planned treatment schedule from beginning to end and with no interruption insures excellent results. When the principles of good therapy, as presently understood, are observed, even poor risk patients with grave lesions can be salvaged. Of the 29 patients in this series good results as of this writing have been obtained in 27, or 93 per cent. The operative mortality was zero, but the late hospital mortality was 6.8 per cent (2 deaths). Both of these deaths occurred in patients with far-advanced disease who were in the "salvage" category, and neither was directly related to pulmonary resection.

The outlook is best in the moderately advanced case. Both postoperative morbidity and mortality should be very low in this class of patient, when managed optimally.

In those patients with far-advanced disease, even though operative and early postoperative mortality are avoided, some late hospital mortality may be anticipated. These will be the patients who may come to surgery with residual positive sputum, residual giant cavities, borderline cardiopulmonary reserve, and, a crucial point, the possibility of organism resistance. This last factor of organism resistance to the known chemotherapeutic agents in effect turns back the clock a decade or more. When no added protection is available during the surgical procedure, delayed reactivations, bronchopleural fistulae, and empyemas are common. This difference in prognosis, hinging on susceptibility of the bacillus, is illustrated by 4 case reports, selected from this series of institutionalized personal cases. The 4 patients had disease of closely comparable severity. Two had susceptible bacteria, and 2 had resistant bacteria. Two had uneventful postoperative courses, and 2 died after prolonged downhill courses, during which additional resections for spread, for empyema, and for bronchopleural fistulae failed.

**Case 2.** W. B., a 41-year-old colored man, had had far-advanced pulmonary tuberculosis at the time of diagnosis. The resolution of the acute and subacute components left him with a satisfactorily healed left lung but with a residual giant cavity in the right upper lobe. Sputum remained positive on smear 11 months after the start of drug treatment. However, the organisms remained sensitive to all 3 antimicrobial agents. Resection was elected. On July 8, 1953, with the prone position being used to protect the left lung, a technically difficult right upper lobectomy was performed. Because of significant residual disease and fibrosis of the right middle and lower lobes, a tailoring thoracoplasty was added to diminish the size of the pleural space. The patient's sputum immediately converted to negative and remained negative, and the patient was discharged in excellent condition on May 12, 1954. Three and one-half years following his resection he is alive, well, and steadily employed. Serial chest films have shown no instability.

**Case 3.** C. D., a 34-year-old colored man, had had far-advanced pulmonary tuberculosis at the time of diagnosis. The acute and subacute disease responded well to therapy, but there was an unchanging residual giant cavity in the apical-posterior segment of the left upper lobe. The sputum remained heavily positive on smear, but the cultured organisms were sensitive. At operation on January 12, 1954 the lingula was found to be a mass of congealed disease, and the apical-posterior segment was entirely replaced by a huge cavity. Following lobectomy the lower lobe expanded well and filled the pleural space, so that there was no necessity for a thoracoplasty. The patient's early and late phases of recovery were completely uneventful. The sputum converted immediately and remained negative. He left the hospital on June 2, 1954 and has remained well in the 3-year interim following his operation.

These results, attainable today only because of the susceptibility of the tubercle bacilli to the antimicrobials, may be compared to the results in similar cases, with comparable residual lesions, but with bacilli which have become resistant. The following 2 patients had resistant bacilli and died many months after their resections of uncontrollable, progressive tuberculosis.

**Case 4.** C. F., a 37-year-old colored man, had had far-advanced pulmonary tuberculosis at the time of diagnosis. This responded slowly to treatment, and 19 months were required to ready him for surgery. There was still a positive sputum, but the last available culture showed the organisms sensitive to isoniazid and para-aminosalicylic acid. There was no open disease in the left lung, but there were multiple small cavities demonstrable by tomography in the right upper lobe and the superior segment of the lower lobe. On November 17, 1953 resection of the upper lobe and a wedge of the lower lobe was accomplished. A small tailoring thoracoplasty was added. The sputum converted to negative immediately, but 3 months later the organisms reappeared. By now they had become resistant to all 3 major drugs. On April 28, 1954 the remainder of the right lung was removed, with viomycin coverage. On June 2, 1954 it was necessary to perform Schede's thoracoplasty because of the appearance of a bronchopleural fistula and subsequent empyema. The patient succumbed to inexorably progressing disease on August 8, 1954, almost 10 months following the original resectional procedure.

**Case 5.** R. O., a 34-year-old white man, had had far-advanced pulmonary tuberculosis at the time of diagnosis. He had never been able to adjust to the treatment régime, and he had twice left sanatoria against medical advice. In each instance drug treatment had been interrupted for periods of 4 months. Now a giant cavity existed in the lingula of the left upper lobe, and the sputum was heavily positive with organisms which were resistant to all 3 major drugs. Resection appeared to be the only chance of overcoming the disease. Viomycin was used to cover surgery, and a very difficult left upper lobectomy was performed on March 21, 1954. The patient did well for 3 weeks, but then a tuberculous empyema without bronchopleural fistula manifested itself. On April 19 the left pulmonary artery was eroded by the empyema, and a massive hemorrhage occurred into the empyema space. Fortunately, the blood clotted and stemmed the hemorrhage before exsanguination could become fatal. The same afternoon, bleeding from the pulmonary artery resumed. This time it was necessary to ligate the artery at the hilum to control the hemorrhage. At still another procedure 3 days later the remainder of the left lung, to which the pulmonary arterial flow had already been ligated, was resected. A month later, the bronchial stump reopened, and the patient succumbed to inexorably advancing disease on July 28, 1954, more than 4 months after his original resectional procedure.

Cases 4 and 5 were the only deaths in this entire series of resectional procedures for pulmonary tuberculosis. They are presented more or less in detail only to emphasize the extraordinary importance of organism control to the success of resectional surgery. Cases 2 and 3 are given in similar detail to emphasize that almost uniform and complete success is the reward of operating under the shield of effective antimicrobial coverage. Ordinarily, precise removal of irreversible disease is possible, not only with recovery of the patient, but even with complete reservation of his functional reserve. This is illustrated by the following case of the series.

**Case 6.** P. Z., a 32-year-old white man, had had far-advanced cavitary tuberculosis of the right upper lobe, for the most part. The disease made a standard good response to drug treatment but left the residual of a destroyed upper lobe. Function studies preoperatively revealed a maximum breathing capacity of 107 liters per minute. The patient underwent resection of the right upper lobe in June, 1953. His recovery was completely uneventful. He was very coöperative in carrying out postoperative breathing exercises and soon attained excellent expansion and contraction of the right hemithorax despite the operative posterolateral thoracotomy scar, and the transpleurally performed resectional procedure. When ventilatory ability was again measured, 5 months postoperatively, his maximum breathing capacity was found to have increased to 114 liters per minute, a gain over the preoperative performance, achieved despite the loss of an entire lobe and despite the major thoracotomy incision.

This case emphasizes that modern surgery aims not only at excising destroyed foci from the body, but also at husbanding the patient's maximum potential functional reserve, mutilating him almost not at all in the performance of the operative procedure.

It must be stated that tuberculosis has long been known as a disease with a strong tendency to relapse, and as a "life-time problem." No claim is made that a follow-up of 30 to 42 months, such as is available on this personal series of institutional cases, has any significance except as hopeful evidence that modern treatment, combining drugs and surgery, is better than anything ever before known for advanced tuberculosis. The 16 patients with moderately advanced tuberculosis got completely well and remained completely well. They have intact chest walls, are free of the deformity of extensive decostalization, and have enough ventilatory reserve to perform manual labor if need be. The 13 far-advanced cases did not fare as well, which is readily explainable when one considers how much irreversible destruction of lung tissue has often occurred in them prior to therapy. Five of them required pneumonectomy. Two of them died. The 11 survivors have negative sputa, closed disease, and stable chest X-ray films as of this writing. Their ventilatory reserve is excellent in 3 and good in 4, and in the other 4 permits little more than an armchair existence.

In the 10 cases performed privately in the last 30 months the benefit of previous experience and of good fortune again resulted in zero operative mortality. There is no reason at present to think that any of the 10 is faced with anything but a hopeful future. Each was operated upon following satisfactory periods of drug treatment and during the period of maximum organism susceptibility to chemotherapy. Each now has a negative sputum and is evidencing stability or continued improvement.

## Conclusions

The effectiveness of chemotherapy in controlling the tubercle bacillus has permitted the surgeon to enter the pleural cavity, excise tuberculous foci, and close the pleural cavity with remarkable safety, and with the confident expectation that the operated patient will continue to do well. In addition to the standard modern technics applicable to all pulmonary resections the only proviso appears to be that the patient have bacilli which are still susceptible to the available drugs. If the bacillus cannot be controlled, resection is very hazardous, and it may be wise in such instances to consider the "outmoded" operation of primary thoracoplasty. Experience with 41 consecutive resections, including 5 pneumonectomies, with zero operative mortality, constitutes the basis for the expressed opinions. A follow-up period of 2½ to 3½ years is available in the first 31 resections.

*(Continued on page 572)*

# COMBINED CHEMOTHERAPY AND SURGERY FOR INOPERABLE MAMMARY CARCINOMA

## Report of Four Cases[*][†]

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FOR VARIOUS reasons some patients with breast cancer do not present themselves for treatment until their lesions are incurable by standard methods. Those patients having ulceration as well as gross lymphadenopathy are particularly difficult to treat, even for palliation. This report concerns 3 such individuals and, in addition, a fourth patient who had a large ulcerated cancer of the breast 3 months after she had received irradiation for inoperable disease.

N N′ N″ triethylene thiophosphoramide,[‡] a polyfunctioning alkylating agent belonging to the nitrogen mustard group of compounds, is a useful agent in the palliation of mammary carcinoma. Varying degrees of healing in ulcerated lesions and regression of tumor have been achieved in patients with cancer of the breast which has recurred following surgery, irradiation and hormone therapy.[1] It was considered unlikely, however, that lesions of the size seen in the 4 patients herein reported would have shown complete regression from chemotherapy alone. For this reason it was decided to combine a limited surgical procedure with chemotherapy. The triethylene thiophosphoramide, or Thiotepa as it is more commonly known, was prepared by dissolving the crystals in pyrogen-free distilled water in a concentration of 10 mg. per c.c. The solution was then sterilized by filtration. Local administration was preceded by injection of 1 to 2 c.c. of novocaine or xylocaine. The Thiotepa solution was injected through the same needle, which had been left in position following the administration of the local anesthetic agent. One dose of drug was administered prior to surgery. Chemotherapy was administered subsequently on a maintenance basis at approximately 1- to 2-week intervals.

### Report of Cases

**Case 1.** L. F., a 59-year-old woman, first noticed a lump in the upper part of the right breast in the fall of 1954. In the spring of 1955 she sought the help of a Christian Science practitioner. By September, 1955 the lesion had become ulcerated. In December, 1955 pain, weight loss, and a slight cough developed. She had been unable to work for some time because of the profuse malodorous drainage from the breast tumor.

The patient was first seen on February 12, 1956. Physical examination revealed a proliferative, ulcerated, heavily infected doughnut-shaped mass measuring 20 cm. in diameter in its widest extent and located in the upper part of the right breast. There was increase in venous pattern above the tumor. The nipple and areola were not grossly involved. However, the lower half of the breast was reddened and exhibited early edema and a "pigskin" appearance. There were several firm, right axillary nodes but no supraclavicular ones. The left breast was normal, and the remainder of the physical examination was noncontributory. A chest X-ray film showed no gross evidence of metastases.

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[*] From Garfield Memorial Hospital, Washington, D.C.

[†] The study and research preliminary to this paper was aided by a grant from the Lederle Laboratories Division of the American Cyanamid Company at Pearl River, New York.

[‡] N N′ N″ triethylene thiophosphoramide was supplied through the courtesy of Dr. James Ruegsegger of the Lederle Laboratories.

The patient was hospitalized and placed on oral and intramuscularly-administered Achromycin. On February 13, 1957 50 mg. of Thiotepa was injected into the middle of the right breast through a long, 22-gauge needle inserted through the lateral aspect of the lower outer quadrant. On February 14 the lesion was excised from the breast by means of an electrosurgical knife. The excision was repeatedly reviewed, and areas where tumor appeared to be present grossly were excised until relatively normal breast tissue and pectoral muscle remained. An Aureomycin dressing was then applied and the wound left open.

On February 21 the red blood cell count was 3.30 million, the white blood cell count 6,000, and the platelet count 190,000 per cu.mm. A second injection of Thiotepa (20 mg.) was made into the upper outer quadrant of the right breast. By February 27 the red blood cell count had dropped to 3.10 million, the white blood cell count to 1,800, and the platelets to 60,000 per cu.mm., and the patient had developed an elevation in temperature. Reports on a culture obtained from the wound confirmed the presence of *Pseudomonas aeruginosa*, which was sensitive to dihydrostreptomycin. Achromycin was discontinued, and therapy with dihydrostreptomycin, 1 Gm. 4 times daily by the intramuscular route, was instituted. Two transfusions of whole blood, 500 c.c. each, were given. Because of general inanition small doses of cortisone were added to the therapeutic regimen. The patient became afebrile, and by March 6 the white blood cell count had risen to 8,000 per cu.mm. At this time she was returned to the operating room for secondary closure of the wound over drains. A small draining sinus persisted for a time, but by April 6 the wound was well healed. Local chemotherapy with injections of Thiotepa alternating from the axilla to various quadrants of the breast was instituted on March 11 and continued first at weekly and later at 2-week intervals. Each dose was determined by the level of the white blood cell count. Treatment was omitted if the latter dropped below 2,000 per cu.mm.

In May, 1956 the patient returned to work full-time. The "pigskin" changes in the breast and the axillary adenopathy had disappeared. A small firm granular mass has persisted under the lateral aspect of the scar, and local injections of Thiotepa have been continued at this site. There has been no other visual or X-ray evidence of metastases. By May, 1957 the patient had received a total dose of 596 mg. of Thiotepa. She has lost no time from her important and demanding job and in addition has led a busy home life.

**Case 2.** K. B., a 67-year-old woman, saw her doctor in 1953 regarding a lump in the left breast which she believed had been present for 2 years. She was advised to return in 6 months for a check-up. At the time of the second examination immediate surgery apparently was recommended. This was rejected, and for the next 6 months the patient received care from naturopaths. In February, 1956 a small ulcer developed on the tumor, and the patient applied for treatment at the Hoxsey Clinic. Oral and local medication was prescribed. By August, 1956 the ulcer had increased in size, and painful swelling of the left arm had developed.

The patient was first seen on September 27, 1956. Examination revealed a heavily infected ulcer which had destroyed the lateral aspect of the left breast as well as the nipple. Underlying induration extended well into the medial side of the breast. Several small satellite nodules were located over the upper medial quadrant of the breast. A large mass of firm lymph nodes were also palpable. The left arm was markedly edematous. A chest X-ray film showed no evidence of metastatic disease.

Since culture of the wound revealed the presence of a *Pseudomonas aeruginosa* resistant to all tested antibiotics except dihydrostreptomycin, therapy with this antibiotic was promptly instituted. Forty mg. of Thiotepa was injected into the tumor in the medial half of the left breast. Five days later a simple mastectomy was performed. Injections of Thiotepa into the left axillary nodes or under the scar were continued subsequently at weekly intervals. The surgical wound healed per primum. Edema of the arm diminished slightly, and, although the adenopathy regressed almost completely, some induration of the soft tissues of the left axilla persisted. In February, 1957 2 or 3 ill-defined nodules were present under the medial end of the surgical scar. Because ulceration developed at this site a limited resection was performed on March 8, 1957. Thiotepa was sprayed under the skin flaps before closure of the wound. Healing occurred without incident and chemotherapy is being continued at 10-day intervals. Seven months after institution of chemotherapy the only evidence of disease is residual induration in the left axilla which shows no evidence of progression.

**Case 3.** N. F., a 74-year-old woman, who gave a history of having noticed a lump in the left breast for several years, presented herself because of progressive ulceration. Examination revealed a tumor measuring 5 by 7 cm. in diameter located under and below the left nipple. A large irregular ulcer, partly covered by a dry eschar, surmounted the mass. A 3 by 5 cm. matted group of lymph nodes could be palpated in the left axilla. There were no other demonstrable metastases. The lesion was considered incurable. However, to avoid if possible a subsequent difficult nursing problem, it was decided to combine simple mastectomy and chemotherapy. On December 27, 1956 60 mg. of Thiotepa was injected into the base of the lesion through a long 22-gauge needle inserted through the lateral aspect of the breast. On December 28 a simple mastectomy was performed. The postoperative course was uneventful. The patient was out of bed on the second postoperative day and was discharged from the hospital 3 days later, at which time she was able to resume her household activities. On January 3, 1957 50 mg. of Thiotepa was injected into the mass of axillary lymph nodes. Therapy has been continued on an outpatient basis at 2-week intervals by this route. The dose of drug has been adjusted according to the white blood cell count done prior to each injection. The mastectomy wound healed promptly and without incident. There has been slow regression of the adenopathy; by May 1957 the mass of axillary lymph nodes measured 2 cm. in diameter. The patient at this time was asymptomatic and doing all her own housework.

**Case 4.** L. T., a 45-year-old woman, noticed a lump in the right breast in January, 1956. In March, 1956 a diagnosis of inoperable mammary carcinoma was made, and a course of roentgen therapy was administered. The patient was first seen 3 months later on June 28, 1956. A large semifixed, fungating, bleeding tumor involved the entire upper outer quadrant of the right breast with extension to the nipple and into the axilla. There were right supraclavicular and axillary lymphadenopathy and hepatomegaly. Fifty mg. of Thiotepa was injected into the right pectoralis muscle, and a right simple mastectomy was performed on July 5, 1956. The wound healed per primum. Chemotherapy was continued at weekly intervals on an outpatient basis. The first postoperative injections were made in the residual axillary nodes. After these showed evidence of regression, therapy was changed to direct injection of hepatic nodules, which were palpable below the costal margin. The patient remained ambulatory and active until October, 1956, when she expired from hepatic failure resulting from the extensive tumor involvement of this organ.

## DISCUSSION

Haagensen[2] includes in his criteria of inoperability extensive edema of the skin over the breast, edema of the arm, ulceration of the skin, axillary lymph nodes measuring 2.5 cm. or more in transverse diameter, and fixation of the lymph nodes to the skin or deep structures of the axilla. He further states that "a surgeon dissecting in tissues infiltrated by carcinoma can be expected to produce showers of carcinoma emboli which should hasten death." All of these criteria were seen in this small group of patients, and each individual exhibited 2 or more of them.

Chemotherapy was used immediately prior to and following surgery in order to lessen the chance of disseminating tumor cells. By employing local administration approximately twice the tolerated intravenous dose of Thiotepa can be given.

It is presumed that at least half the dose is rapidly picked up by the blood stream and that systemic effect as well as local tissue saturation with Thiotepa is achieved. Cancer cells which have been shed into the blood stream and have not yet become implanted on tissue probably are more vulnerable to a chemotherapeutic agent than cells which have an established blood supply.

Patients with inoperable mammary cancer treated by irradiation at the Presbyterian Hospital in New York City lived only slightly longer than the untreated patients in Wade's collected series.[2] This may have been true, because irradiation would not prevent distant metastases from developing when disseminated disease was present. In case 4 of our series not only was the ulcerated breast lesion uncontrolled 3 months after irradiation therapy, but the patient also had evidence of hepatic metastases which later resulted in her demise.

Hormone therapy has received extensive trial during the last decade in the treatment of advanced mammary carcinoma. Androgens are preferred in patients 5 years or more postmenopausal. Objective improvement may be achieved in 23 per cent of patients treated with androgens; the average duration of improvement which can be anticipated is 7.5 months. In addition to side-effects of masculinization, androgen therapy is attended by the risk of tumor acceleration. All 3 of the patients in this group (100 per cent) who were postmenopausal were, and continue to be, objectively improved at 15, 7, and 5 months, respectively.

Case 4, the 45-year-old woman who had relapsed 3 months after a course of irradiation therapy, might have been a candidate for estrogen therapy. Estrogens achieve a 44 per cent objective remission in ulcerated lesions with an average of 8 months' duration.[3] However, it is hardly likely that this form of therapy would have slowed the extensive hepatic metastatic process seen in this patient. Furthermore, since 50 per cent of patients with breast cancer are estrogen-dependent, the hazard of tumor acceleration must be considered.

Because ablative hormone operative procedures as adrenalectomy and hypophysectomy are attended with an impressive morbidity risk, as well as only limited control expectancy, these procedures were not considered practical.

Thiotepa can be administered easily on an outpatient basis and is notable for lack of clinical side-effects. This agent is a hematopoietic depressant, and pretreatment blood counts are essential. Since the white blood cells are primarily affected, therapy can be guided by the white blood cell count alone. Occasional checks on hemoglobin level are desirable. Marked depression of erythropoiesis suggests uncontrolled cancer or bleeding rather than drug depression.

All of the patients in this group have been able to carry on their normal activities; one of them has been gainfully employed more than a year in an important Government job. Even the patient who died was able to care for her family until the last 3 weeks of her life.

The possibility of curative therapy was not considered in these patients. Surgery was used to remove gross ulcerated disease and eliminate a difficult nursing problem. Chemotherapy was employed to help control local disease and prevent or control distant metastases.

## Summary

Three patients with large ulcerated breast carcinomas and a fourth patient with a larger ulcerated lesion which had recurred 3 months following irradiation therapy were treated by a combination of modified surgery and chemotherapy.

Three patients are active with the disease controlled and no evidence of distant metastases at 15, 7, and 5 months, respectively.

The fourth patient died with hepatic failure secondary to massive liver metastases 4 months after surgery. She was active until 3 weeks prior to death.

N.B. Grateful acknowledgement is made to Drs. Ernest A. Gould, Ralph D. Whitley, and Charles V. Amole for their invaluable help.

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# SODIUM SULFACETAMIDE: ITS PROPERTIES AND CLINICAL USES, WITH SPECIAL REFERENCE TO THE THERAPY OF SEBORRHEA CAPITIS AND SEBORRHEIC DERMATITIS*

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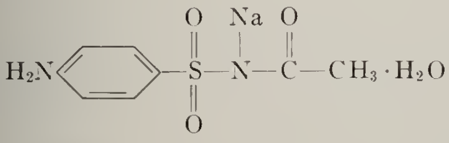
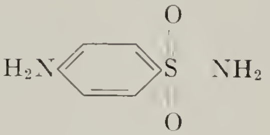
SODIUM SULFACETAMIDE is a sulfonamide that has enjoyed an extended period of use by topical application. The parent substance, sulfacetamide, has been widely used in systemic antibacterial therapy of urinary tract infections.[1-10] Sodium sulfacetamide solutions are accepted throughout the world for their effectiveness in the prophylaxis and treatment of ocular infections.[11-21] This sulfonamide has also been applied topically in the prophylaxis of infection in wounds and burned areas.[22-28] Comparatively recently the use of the sodium derivative has been extended to seborrheic conditions, particularly seborrheic dermatitis and common dandruff, and it is this usage that I will describe.

## CHEMISTRY

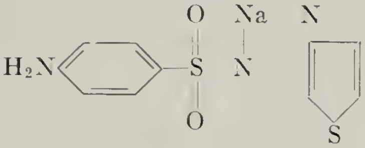
Sodium sulfacetamide is the monohydrated sodium salt of $N^1$-sulfanilylacetamide, M.P. 263°C. Its structural formula compares with that of sulfanilamide and sulfathiazole sodium as follows:



Sodium sulfacetamide



Sulfanilamide



Sulfathiazole sodium

Sodium sulfacetamide is very soluble in water (56.9 per cent), slightly soluble in ethanol, and practically insoluble in water-immiscible solvents (ether and mineral and vegetable oils). It is highly soluble at physiologic pH. A comparison of the solubilities of 4 sulfonamides as saturated aqueous solutions is shown in table 1.

TABLE 1[27]

*Comparison of 4 Sulfonamides in Saturated Aqueous Solution*

| Sulfonamide | Concentration | pH |
|---|---|---|
| | *Per cent* | |
| Sodium sulfacetamide | 56.9 | 9.24 |
| Sodium sulfadiazine | 51.7 | 9.88 |
| Sodium sulfathiazole | 28.6 | 10.42 |
| Sodium sulfapyridine | 50.0 | 10.78 |

Table 2 shows the pH readings of 20 per cent solutions in plasma at pH 7.05 of these same sulfonamide sodium salts.

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* Read before the Annual Technical Meeting of The Society of Cosmetic Chemists at the Hotel Commodore in New York City, December 15, 1955.

TABLE 2[27]

*pH Readings of Sodium Salts in Plasma of pH 7.05 in a Concentration of 20 per cent*

| Sulfonamide | pH |
|---|---|
| Sodium sulfacetamide | 7.68 |
| Sodium sulfadiazine | 9.00 |
| Sodium sulfathiazole | 9.28 |
| Sodium sulfapyridine | 10.48 |

## ANTIBACTERIAL ACTIVITY

Clinical experience and in vitro testing have shown that sodium sulfacetamide attacks a wide range of microörganisms. Comparing the in vitro antibacterial activity of agar plate concentrations of sodium sulfacetamide, Duemling[29] found that 5 per cent concentrations of sodium sulfacetamide inhibited growth of a variety of Gram-positive and Gram-negative organisms, including those commonly isolated from cutaneous pyogenic infections.

Table 3 shows the antibacterial activity of the substance against various organisms.

Although certain staphylococci and streptococci are commonly found in many cutaneous infections, the increasing incidence and importance of Proteus and Pseudomonas in these conditions makes a drug active against both Gram-positive and Gram-negative bacteria valuable in topical therapy. Duemling[29] found that a combination of bacitracin and neomycin with polymixin B would be required to equal the effective antibacterial range of sodium sulfacetamide as shown in figure 1.

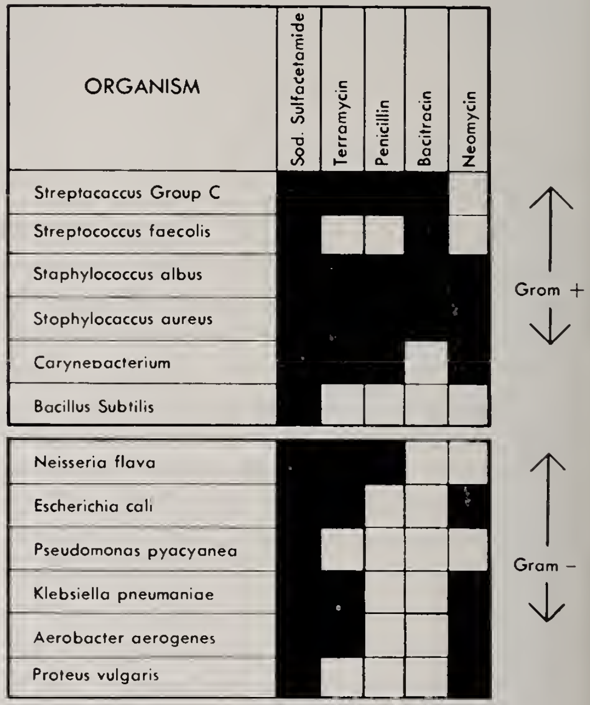

Chart assembled from data published by manufacturers of antibiotics and unpublished data from Division of Clinical Research, Schering Corporation.

FIG. 1. Comparison of in vitro antibacterial activity of sodium sulfacetamide and antibiotics.[29]

TABLE 3

*Growth after Incubation at Indicated Percentage of Sodium Sulfacetamide (Agar Plate Method)*

| Organism | 5% | 3% | 2% | 1% | 0.8% | 0.6% | 0.4% | Control | |
|---|---|---|---|---|---|---|---|---|---|
| Streptococcus Group C | − | − | + | + | + | + | ++ | +++ | Gram + |
| Streptococcus faecalis | − | − | + | + | + | ++ | +++ | +++ | |
| Staphylococcus albus | − | + | + | ++ | ++ | ++ | ++ | +++ | |
| Staphylococcus aureus | − | + | ++ | ++ | ++ | ++ | +++ | +++ | |
| Corynebacterium simplex | − | − | − | − | − | − | ++ | +++ | |
| Bacillus subtilis | − | − | − | − | − | − | − | +++ | |
| Neisseria flava | − | − | − | − | − | − | − | +++ | Gram − |
| Escherichia coli | − | − | − | − | − | − | + | +++ | |
| Pseudomonas pyocyanea | − | − | − | − | − | − | − | +++ | |
| Klebsiella pneumoniae | − | − | − | − | − | − | − | +++ | |
| Aerobacter aerogenes | − | − | − | − | − | − | ++ | +++ | |
| Proteus vulgaris | − | − | − | + | ++ | ++ | ++ | +++ | |

## USES OF SULFACETAMIDE AND SODIUM SULFACETAMIDE

First introduced in Europe, sulfacetamide has been known abroad as Albucid and sodium sulfacetamide as Albucid Soluble. These substances attracted great interest, and their use was extended to this country.

*Sulfacetamide in Systemic Infections.* The excellent antibacterial activity of sulfacetamide has made it particularly suitable for the treatment of urinary tract infections. It has an advantage in that it is highly soluble even in the physiologic acid range of urine, and thereby it minimizes almost to a negligible point the danger of concrement formation that attends the administration of some other sulfonamides. In addition, sulfacetamide combines the features of low toxicity and rapid renal elimination with a high concentration in the urine. It is also used in combination with other sulfonamides and with penicillin in systemic infections.

*Sodium Sulfacetamide in Ophthalmology.* The choice of an antibacterial agent for local application to the eye is based upon such factors as solubility, local penetration of the compound into the subjacent tissues, and the bacteriostatic power of concentrations that can be developed in the tissues.[30] The high solubility, lack of irritation, good penetration, and prolonged antibacterial action in ocular tissue are among the factors that combine to make sodium sulfacetamide valuable in treating ocular infections.[30]

Other considerations that influence the choice of a topical antibacterial agent are its spectrum of effectiveness, allergenic potential, local tissue tolerance, and systemic absorption. As shown in vitro and demonstrated clinically, sodium sulfacetamide exerts a powerful bacteriostatic effect against a wide variety of Gram-positive and Gram-negative microörganisms. The low alkalinity of its solutions, the almost total lack of irritation on even the most delicate tissues, and negligible sulfonamide blood levels from topically applied solutions combine to make sodium sulfacetamide a valuable topical antibacterial.

The high solubility of sodium sulfacetamide at nearly neutral pH may be related to penetration and absorption through ocular and dermal barriers. Corneal concentrations of 800 mg. per 100 ml. are reported to be obtained in 15 minutes from a 1-drop instillation of a 30 per cent aqueous sodium sulfacetamide solution.[31, 32]

In studies on the skin penetration of sulfonamides from oil-in-water or water-in-oil emulsions, sodium sulfacetamide gave greater penetration than either sulfathiazole or sulfadiazine.[33] The oil-in-water type allowed greater penetration in an inflamed or denuded cornea.[34]

Sodium sulfacetamide is used in ophthalmology in a 10 per cent solution alone or combined with methyl cellulose. Among the indications for its use are the treatment and prophylaxis of infections of the eye, corneal ulcers, blepharitis, chronic conjunctivitis, dacryocystitis, infections of the eye socket, styes, and trachoma. It also is used prophylactically following corneal abrasions,[30] lacerations or burns, after the removal of foreign bodies from the eye, and to prevent ophthalmia neonatorum.[35] Its record of effectiveness in these situations is enviable.[11-21] Sodium sulfacetamide has the advantage on local application of being relatively nonirritating and in thousands of applications has proved unlikely to cause sensitivity reactions.[11-15, 21, 30, 36-39] "New and Nonofficial Remedies," published by the American Medical Association, contains the statement in the monograph on sulfacetamide that "Its sodium derivative has been used widely for topical treatment of certain infections of the eye because of the rarity of sensitization reactions."[40]

*Sodium Sulfacetamide for Dermal Application.* Sodium sulfacetamide is effective when it is applied to the skin as well as to the eye. Both the parent compound and the sodium derivative have been used to prevent or overcome infection following burns and after surgical and accidental wounds.[22-28] Various dermatoses have also responded to its use.[41–45] Again, the ability of sodium sulfacetamide to penetrate tissues is no doubt of assistance in the treatment of deep-seated infections of the skin.

In dermatologic conditions also, the use of sodium sulfacetamide has been accompanied by an extremely low incidence of irritation and sensitivity reactions.

*Sodium Sulfacetamide in Seborrhea Capitis and Seborrheic Dermatitis.* Among the newest uses of sodium sulfacetamide is the treatment of dandruff and seborrheic dermatitis. The discovery of its effectiveness in these conditions came about during the application of sodium sulfacetamide ophthalmic ointment for a severe blepharitis and purulent conjunctivitis.[29] The patient, without the knowledge of the physician, applied a 10 per cent sodium sulfacetamide ointment to a recalcitrant scaling eruption of the scalp and other body areas. To his delight, he experienced the same gratifying relief that he had obtained in the ophthalmic condition.

Since that time, sodium sulfacetamide has been incorporated in a lotion that contains 100 mg. of the sulfonamide in each gram. This preparation is known as Sebizon Lotion and is available in a squeeze bottle for application to the skin and scalp. This preparation contains various agents that are surface active and allow the medication to come intimately into contact with the skin. It is nongreasy and disappears when rubbed into the skin or scalp. Its application does not interfere with the arrangement of the hair.

The use of sodium sulfacetamide topically can be effectively extended to scaling dermatoses, seborrheic dermatitis, seborrhea sicca, and still other bacterial infections of the skin.

### SENSITIVITY UPON DERMAL APPLICATION

The questions arise as to whether or not a preparation like Sebizon will cause irritation or sensitivity reactions when it is applied to the skin and scalp. Various tests have been conducted to answer these questions.

In a test under my scrutiny, the likelihood of sensitivity reactions and of irritation upon application to the skin was assessed prior to using Sebizon Lotion topically during clinical evaluation in dermatologic conditions.[46] One hundred patients with dandruff and 2 with seborrheic dermatitis applied Sebizon Lotion daily for 1 week. The directions for application were the same as those used during clinical treatment. During the second week these patients remained untreated. This alternating sequence was repeated 3 times. Not 1 of the 102 patients noted any irritation. Neither did any sensitivity reactions or other adverse effects occur.

Duemling[29] performed a series of patch tests on 50 persons with a shampoo containing 3 per cent sodium sulfacetamide, an ointment containing 10 per cent of this sulfonamide in an oil-in-water type base, and a 30 per cent solution. The tests were read in 24 and 48 hours, and were repeated on the same skin areas of the subjects after an interval of 2 weeks. No evidence of irritation or sensitization was detected.

Other investigators have made patch tests prior to the use of Sebizon Lotion. Thus, in 266 individuals, many of them children, Sebizon Lotion was applied to a small area of the forearm. The tests were read after 24 to 48 hours. Tests were repeated from 1 to 4 times, with a total of 743 patch tests performed. The only reaction noted was slight erythema in 9 patients. Six of the patients showing erythema had previously exhibited sensitivity to other sulfonamides such as sulfathiazole, sulfapyridine, or sulfadiazine. This redness did not appear in some until the second or third test and disappeared spontaneously after 1 or 2 days in all of the patients. Repeat tests were negative in all instances. Three of the patients showing erythema had transitory itching at the site of application of the lotion.

Thus, sensitivity tests were performed in a total of 418 patients in whom more than 3,000 applications of Sebizon Lotion containing 10 per cent sodium sulfacetamide were made. The incidence of slight erythema was 2.1 per cent when those patients who were known to be sulfonamide-sensitive were included, or 0.7 per cent among patients not known to be sulfonamide-sensitive.

The final test of the likelihood of any substance to cause irritation or sensitization is in its continued application by patients. In preliminary clinical reports 3,204 patients applied Sebizon Lotion in all kinds of conditions, including seborrheic dermatitis, dandruff, dermatoses, and pyodermas. Eleven sensitivity reactions occurred in this group. This is an incidence of 0.3 per cent, which is very low in comparison with the incidence of sensitivity reactions attending the topical application of many sulfonamides.[47] A total of 63 instances of irritation has been reported in this preliminary clinical experience, an incidence of 1.9 per cent. In some of the patients who were irritated patch tests were performed with negative results. Some of the irritation was due to improper application, and in at least 1 instance in my experience it occurred only after the lotion had been applied daily for 6 weeks.

## SEBORRHEIC CONDITIONS

In 1840 Fuchs coined the term "seborrhea" to designate excessive oiliness of the skin. The mid-portion of the face, the scalp, the sternal and interscapular regions, the axillae, and the pubic regions are the sites of predilection. These are the areas most profusely supplied with sebaceous glands. Unna clarified this concept further by removing this category from the heterogeneous group of eczemas and described an eruption commonly occurring in these seborrheic areas, designated seborrheic dermatitis.[48] Seborrhea occurs at puberty when there is increased activity of the sebaceous glands. These individuals are said to have oily skins. There is an excess of sebum in the areas mentioned. The facial skin is shiny, and in hot weather tiny beads of sebum appear at the glandular orifices of the face and scalp, especially where there is marked hair loss.[49]

## ETIOLOGY OF SEBORRHEA

The role of the microörganisms found actively multiplying in seborrheic eruptions is still disputed. The *Pityrosporum ovale* (spore of Malassez), *Corynebacterium acnes* (acne bacillus), and *Micrococcus cutis communis* may be termed as the seborrheic triad, but *Staphylococcus pyogenes albus*, *Staphylococcus aureus*, and *Staphylococcus citreus* may also be responsible for eruptions that are associated with the seborrheic state.[50] It is generally agreed that the seborrheic triad are normal inhabitants of the skin. In certain conditions they are observed in a state of very active growth. The problem, however, is to what extent such activity is of pathogenic significance. This has been somewhat simplified by the knowledge we now have concerning the influence of sex hormones on the stratum corneum and the sebaceous glands.[50]

It may be that *Pityrosporum ovale* is the cause of a noninflammatory exfoliation of the horny cells (scaliness) on the scalp that is called pityriasis simplex. The transition or transformation of pityriasis simplex to pityriasis steatoides may be due to the active growth of the *Micrococcus cutis communis* superimposed upon an existing infection of the stratum corneum of the skin by *Pityrosporum*.[50]

A more inflammatory variety of seborrheic dermatitis may result from superimposed infection with more virulent strains of staphylococcus, usually *Staphylococcus aureus*, and be complicated by invasion of the follicles, with the production of boils, sycosis, or hair follicle infection.[50]

Environmental factors contribute to the development of seborrheic conditions. Living and working indoors in poorly ventilated and overheated apartments and offices, and a lack of exercise predispose toward their development. In 1902 Sabouraud stated, "Seborrhea is a microbic malady but develops only under certain conditions of age and of general health." He noted that this condition was rare in peasants who performed hard physical labor in the open air and was more common in sedentary and city workers.[51]

There may even be said to be a constitutional habitus, with oiliness or greasiness of the skin of the seborrheic areas. Visibly enlarged pores may have a slight reddening about the opening and often contain a soft greasy slug of sebaceous material that is easily expressed. The skin of such individuals may have a dirty yellow or grayish appearance, with yellow to red greasy scaling. The skin may also be thickened.

Hormonal factors play a part in causation.[50] Androgens stimulate keratinization of the surface of the skin and the pilosebaceous follicles and active secretion of the sebaceous glands. They favor the growth of the seborrheic triad of organisms. Estrogens reduce the activity of the sebaceous glands; the pilosebaceous orifices are reduced in size and are no longer visible; the hypertrophy of the stratum corneum disappears, and the skin becomes smooth like that of a child, the hair dry and more fluffy. Dandruff ceases to form and may disappear without local treatment.

A diet that has an excess of carbohydrates and fats predisposes to water retention in the tissue spaces. This wateriness of the skin favors bacterial activity. Deficiency of vitamin B (especially thiamine) also tends to produce water retention. The greater the carbohydrate intake, the greater is the need for vitamin B. A diet to counteract the effect of water retention consists of a relatively large amount of protein, nucleoprotein, vegetables, fruit, and dairy products. Carbohydrate foods should be those high in vitamin B content.

In patients with seborrheic conditions there may be a high urinary acidity. Sometimes the urinary pH has ranged from 4.5 to 5.8, whereas the normal range is 6.4 to 6.8. Large amounts of alkali have been necessary to overcome such acidity.[51]

Emotional factors like anxiety, stress, and mental and physical fatigue and insecurity contribute to the development of seborrheic conditions.[50] Patients with seborrhea are likely to feel insecure and to withdraw from social contacts. It seems that the seborrheic patient does not only feel ostracized because of his skin affection, but that he is prone to develop the eruption because he feels and believes that he has reason to be ostracized.

Especially in the care of the scalp, the human factor has etiologic significance. The laity in general are victims of hearsay, old wives' tales, and the like with regard to the care of the scalp. The comment often heard from patients is that their barber or beautician has advised that the hair not be shampooed more often than once every 2 weeks. This view holds for the majority of individuals that I have treated. Others state that they have been in the habit of washing their hair only once in 1 to 3 months. A small percentage of individuals wash their hair oftener than once a week. Women are the worst offenders. With the hair styles of today, the thought is that the less frequently the hair is washed, the longer the "set" will last. It will be of interest clinically to see whether or not the popularly used spray net lotions will become implicated in the etiology of seborrhea.

The scalp should be regarded in the same manner as a piece of furniture, that is, as a dust collector. The scalp collects various organisms, the scales that are shed, glandular secretions, and the dust of the air. The interplay of all of these factors, I am certain, promotes the development of seborrhea capitis. It could be largely avoided by proper cleansing methods, varying the interval between shampoos from 3 to 7 days, depending upon the type of scalp.

### SEBORRHEA CAPITIS

Seborrhea capitis is an abnormal condition of the scalp. The process manifests itself as scaliness, commonly known as dandruff. This scaliness is divided into dry, waxy, and oily types. Whereas in this country dandruff is known as seborrhea capitis, regardless of the type of scales, the English and French schools of thought use the terminology "pityriasis simplex capitis" for the dry stage since it consists of simple dry scaliness, "pityriasis steatoides" for the waxy type, and "seborrhea oleosa" for the oily type. There are also 3 varieties of dandruff: the loose form easily seen on dark clothing, the adherent type which can be scraped loose with the finger nail, and a combination of these types.

There is no standard duration for each stage of dandruff. An individual may have only the dry stage, which may last for years or be transient. The waxy stage may also be transient. The condition will progress from the dry to the waxy, and then to the oily stage. The oily phase is permanent. The hair is extremely oily and must be washed frequently.

Seborrhea capitis, especially of the waxy or oily type, is a cause of baldness. The dry type has never been indicted in alopecia. The mechanism of hair loss is invasion of seborrhea into the hair follicle, causing atrophy of the root. The process is reversible, if the patient seeks early treatment. If he delays, he is likely to assume the "billiard ball look." A patient who is bothered by hair loss due to seborrhea can control and reverse the process in 2 weeks' time with some of the preparations now in use. If the scalp is not kept in good condition, and the patient does not maintain a constant vigil indefinitely, hair loss will recur.

Becker and Obermayer[49] give the following directions for the care of the scalp: "The hair should be wet with warm water and lathered with a mild soap during childhood, and with a mild or strong soap after puberty, depending on whether the scalp is dry or oily, and this lather should be removed immediately. The hair is relathered and allowed to remain so for five to fifteen minutes for a dry scalp, and thirty minutes for an oily scalp. The lather is then thoroughly removed with hot water, the scalp is rinsed with cool water and dried thoroughly. For dry scalps, use a mild soap. For oily scalps, Tincture of Green Soap may be used." These authors do not mention the need for, nor the efficacy of, a shampoo. Today there is a bottle of shampoo in almost every household in the country. The public is "taken in" by advertisements that state that such and such a shampoo does the best job. There is nothing wrong with using a shampoo, but the public is not aware that soap will accomplish the same thing, if the directions just given are carefully followed. The detergent shampoos are probably superior to soap in cleansing ability. However, I feel that the use of soap and adherence to these directions will produce excellent results.

## SEBORRHEIC DERMATITIS

Seborrheic dermatitis is a subacute or chronic inflammatory disease occurring in the areas involved in seborrhea. It is characterized by a tendency to enlarged or functionally overactive sebaceous glands, and this may be recognized through several generations of the same family.

The skin reacts similarly to the scalp, and there are dry, waxy, and oily types of seborrheic dermatitis. Dry or waxy scales may be observed on the face, sometimes accompanied by pruritus. The oily and waxy types of seborrheic dermatitis may be preceded by seborrhea of the scalp. Seborrheic dermatitis of the skin of the face and body occurs secondary to seborrhea of the scalp. Bacteria may play a role.

The sites of predilection of seborrheic dermatitis are as follows:

1. Hairy parts—scalp, eyebrows, eyelashes, axillae, pubic regions, moustache, beard.
2. Skin of the head—forehead, eyelids, sides of the nose (nasolabial folds), ears (meatuses, pinna, retroauricular spaces), sides of neck.
3. Trunk—chest (sternal area), back (interscapular area), umbilicus.
4. Intertriginous areas—axillary areas, flex areas of arms, groins, inguinal perianal region, perianal region, submammary regions.

Clinically, seborrheic dermatitis may be divided into 2 types: a scaly erythematous type occurring in seborrheic areas, and a moist, fissured type that attacks the folds.

The eruption affecting seborrheic areas usually begins as 1 or more small erythematous spots covered with greasy, yellow scales. The lesions gradually increase in size to form coin-shaped or polycyclic patches containing central yellowish zones and with reddened, raised borders.

On the scalp the eruption may be diffuse, or consist of erythematous spots covered with yellowish, greasy, and occasionally branny scales. Oozing and crusting may be present as a result of scratching. Hair loss may occur. The scalp involvement may be accompanied by scaling and redness of the ears, usually at the entrance to the auditory canal and on the area behind the ear (retro-auricular region). This area, when actively involved, shows inflammation, oozing, crusting, and fissuring, with extension down the sides of the neck. Another avenue of spread from the scalp may be to the forehead, the eyebrows, the glabella (area between the brows), and the nasolabial folds.

The flexural type of eruption presents a different picture. The axillae, postauricular and submammary regions, groins, perineal region, perianal region, and umbilicus may be involved. The eruption begins with small erythematous, scaly or moist, exudative, persistent spots. Plaque-like lesions may develop. Without treatment, the eruption extends and produces smaller outlying satellite lesions. The perianal region is probably involved most frequently and often is the only site attacked. The vault of the axilla is the only portion affected.

## Sebizon in Seborrhea Capitis and Seborrheic Dermatitis

Sebizon is one of the newer preparations introduced for the treatment of seborrhea capitis and seborrheic dermatitis. At the annual meeting of the American Dermatological Association in June 1953, Duemling[29] reported the use of sodium sulfacetamide locally in the treatment of 76 patients with seborrheic dermatitis of varying degrees of severity. In 46 patients the disease was completely controlled in 2 weeks to 6 months. I have related how his discovery of the effectiveness of sodium sulfacetamide in seborrheic dermatitis sprung from the ophthalmic use of an ointment containing this substance. He used a sodium sulfacetamide ointment in conjunction with a shampoo containing 3 per cent sodium sulfacetamide. Striking improvement was apparent even in those cases of seborrheic dermatitis complicated by secondary bacterial infection, oozing, and crusting. The ointment cleared such dermatoses as folliculitis, impetiginized dermatitis, neurotic excoriations, otitis externa, and sycosis vulgaris.

Andrews,[52] in discussing the treatment of seborrheic dermatitis, has said that "Sebizon Lotion containing 10 per cent sodium sulfacetamide (Schering) is extremely effective both on the scalp and skin." The lotion has also been reported to work "very well" in "recurrent vesicular eruptions on the scalp."[53]

Preliminary clinical reports of the use of Sebizon Lotion containing sodium sulfacetamide have been uniformly favorable. Parish[54] treated 141 patients with long-standing seborrheic dermatitis of the scalp with Sebizon Lotion and observed an excellent response in 132, or 93.6 per cent. The clearing of lesions, the disappearance of itching and scaling, and in some instances the relief of dryness characterized the response which took place during treatment for 1 to 2 months. Lesser degrees of improvement occurred in 7 patients and no improvement in 2 patients. Seborrheic dermatitis of 10 years' duration in 1 patient in his series of 141 was limited to the nose and face. After responding favorably at first, more frequent applications became necessary later to maintain the benefit achieved. Two patients with eczema in the aural region of 8 to 10 years' duration were relieved of itching, and the thickened and peeling areas cleared.

The incidence of major improvement among those treated with Sebizon Lotion by Whelan[55] was as follows: seborrheic dermatitis of the scalp, 88 per cent; seborrheic dermatitis of the glabrous skin, 66 per cent; and seborrhea, 30 per cent. The results in the treatment of acne vulgaris, rosacea, and the pyodermas were poorly defined.

Seborrheic dermatitis was completely cleared in 14 of 20 patients (70 per cent) treated by Yontef[56] and was improved in the remaining 6 patients. This author uses the terminology "seborrhea sicca" for the dry type of seborrhea of the scalp. This is the terminology of the German school of thought and is really paradoxical for the dry stage inasmuch as "seborrhea" implies excess of oily secretion and "sicca" refers to dryness. Among 40 patients with seborrhea sicca treated with Sebizon by Yontef only 3 failed to improve, and the condition was cleared completely in 11. He found that several bacterial infections, alone or complicating dermatoses, cleared rapidly following the topical application of sodium sulfacetamide.

A tabulation of the preliminary results in the topical use of Sebizon Lotion[46, 54–57] shows that it has been used in 1,747 patients with seborrheic dermatitis of the scalp and body areas, in 691 patients with seborrhea capitis, and in 766 patients with a variety of dermatoses and pyodermas (table 4).

TABLE 4

*Composite of Preliminary Results in the Topical Application of Sebizon Lotion*

| Indication | Total No. Patients | Complete Relief | Improvement | Little or No Improvement | Sensitivity Reaction | Irritation |
|---|---|---|---|---|---|---|
| Acne necrotica—scalp | 2 | | 2 | | | |
| Acne rosacea | 3 | 2 | 1 | | | |
| Acne and seborrhea | 22 | | 22 | | | |
| Acne varioliformis | 1 | | | 1 | | |
| Acne vulgaris | 50 | | 35 | 15 | | |
| Acne vulgaris, infected | 38 | 10 | 15 | 13 | | 2 |
| Alopecia areata | 14 | | 3 | 11 | | |
| Alopecia, seborrheic | 4 | | 3 | 1 | | |
| Blepharitis | 1 | | | 1 | | |
| Cradle cap | 13 | 11 | 1 | 1 | | |
| Dandruff (seborrhea capitis) | 678 | 300 | 345 | 33 | | 3 |
| Dermatitis | 14 | | 14 | | | |
| Dermatitis, allergic | 6 | | | 6 | | |
| Dermatitis, contact | 14 | | 8 | 6 | | |
| Dermatitis, eczematoid | 8 | 3 | 2 | 3 | | 1 |
| Dermatitis, eczematoid, infectious | 47 | 18 | 24 | 5 | | 2 |
| Dermatitis herpetiformis | 5 | | | 5 | | |
| Dermatitis, lichenified | 2 | | | 2 | | |
| Dermatitis, seborrheic | 1,047 | 473 | 457 | 117 | 10 | 44 |
| Dermatitis, seborrheic, infectious | 32 | 30 | 2 | | | |
| Dermatitis, seborrheic—scalp | 503 | 268 | 175 | 60 | | 5 |
| Dermatitis, seborrheic—scalp and body areas | 58 | 53 | 3 | 2 | | 1 |
| Dermatitis, seborrheic—scalp and pyoderma | 7 | 5 | 2 | | | |
| Dermatitis, seborrheic with dandruff | 59 | 51 | 7 | 1 | | |
| Dermatitis, stasis | 2 | | 2 | | | |
| Dermatophytosis | 7 | | 1 | 6 | | |
| Eczema | 54 | 8 | 17 | 29 | 1 | 2 |
| Eczema, allergic, with infection | 7 | | 7 | | | |
| Eczema, atopic | 15 | 1 | 2 | 12 | | 1 |
| Eczema, nummular | 9 | | 1 | 8 | | |
| Eczema, seborrheic | 9 | | 5 | 4 | | 1 |
| Erythrasma | 2 | | 2 | | | |
| Folliculitis | 10 | 8 | 2 | | | |
| Folliculitis—scalp | 5 | 4 | 1 | | | |

TABLE 4—*Concluded*

| Indication | Total No. Patients | Complete Relief | Improvement | Little or No Improvement | Sensitivity Reaction | Irritation |
|---|---|---|---|---|---|---|
| Hair loss, cyclic | 1 | | 1 | | | |
| Ichthyosis | 1 | | | 1 | | |
| Impetigo | 40 | 33 | 7 | | | |
| Intertrigo | 5 | 1 | 4 | | | |
| Keratoses | 1 | | | 1 | | |
| Keratosis, seborrheic | 5 | 4 | 1 | | | |
| Lichen planus | 3 | | 3 | | | |
| Lymphoma, cutaneous | 2 | | 2 | | | |
| Molluscum | 1 | | | 1 | | |
| Multiple involvement (seborrhea and pyoderma) | 15 | 13 | 2 | | | |
| Neurodermatitis | 11 | | 6 | 5 | | |
| Neurotic excoriations | 4 | | 4 | | | |
| Otitis externa | 1 | | | 1 | | |
| Parapsoriasis | 2 | | | 2 | | |
| Pediculosis capitis | 1 | | | 1 | | |
| Pemphigus | 2 | | 1 | 1 | | |
| Perlèche | 1 | | 1 | | | |
| Pityriasis rosea | 7 | | 6 | 1 | | |
| Pityriasis simplex, perioral | 1 | 1 | | | | |
| Pompholyx | 2 | | | 2 | | |
| Pruritus ani | 2 | | | 2 | | |
| Pruritus vulva | 2 | | 1 | 1 | | |
| Psoriasis | 65 | 1 | 13 | 51 | | |
| Psoriasis—scalp | 5 | | 3 | 2 | | |
| Psoriasis and/or psoriasiform seborrhea | 5 | | | 5 | | |
| Pyoderma—scalp and body | 11 | 8 | 3 | | | |
| Pyodermas | 144 | 72 | 51 | 21 | | 1 |
| Radiodermatitis | 1 | | | 1 | | |
| Rosacea | 1 | | 1 | | | |
| Scabies, infected | 13 | 13 | | | | |
| Seborrhea | 26 | 8 | | 18 | | |
| Spider hemangioma | 1 | | | 1 | | |
| Sycosis vulgaris | 25 | 22 | 1 | 2 | | |
| Ulcer, diabetic | 2 | | 2 | | | |
| Ulcer, varicose, infected | 42 | 40 | 2 | | | |
| Ulcus cruris | 4 | | 4 | | | |
| Warts | 1 | 1 | | | | |
| Total | 3,204 | 1,462 | 1,280 | 462 | 11 | 63 |

In my own experience, patients with seborrhea capitis have applied Sebizon Lotion twice daily for 2 weeks and shampooed their hair every 2 to 4 days for 2 weeks in accordance with the severity of the condition. The lotion was streaked from the squeeze bottle through the hair. The patient used his fingers or a hair brush to distribute it over the scalp. If more lotion than necessary was used, a powdery film appeared on the hair and the quantity per application was reduced.

When the hair or scalp was oily, the application of the lotion was preceded by a shampoo. When there were thick patches of scales, crusting, hair loss, or excessively oily secretion of the scalp, the hair and scalp were first thoroughly cleansed and Sebizon Lotion applied at bedtime and during the day. More frequent application was required when the scalp was secondarily infected, or when an actual dermatitis was present.

When seborrhea was limited to the skin, Sebizon Lotion was applied to the affected areas 3 or 4 times daily and rubbed in well. To each patient the manner in which Sebizon Lotion should be applied was demonstrated by placing 1 drop on the skin and rubbing until the area covered with a thin layer became dry. The patients were impressed with the thought that only the lotion in direct contact with the skin could be effective and that it was unnecessary to apply a thick layer. No other medication was used.

I have treated 201 patients with seborrhea capitis with Sebizon Lotion. One hundred and sixty-four of them had the ordinary type of dandruff of the scalp. Nine had heavy scaling or crust formation. In 22, hair loss accompanied seborrhea capitis. In 6, the scalp was secondarily infected. One hundred and seventy (84 per cent) of the whole group were completely relieved of itching, scaling, and oiliness. Itching usually ceased in less than a week and sometimes disappeared after only a few applications of the lotion. In about one-third of the patients, treatment could be finally evaluated after application of the lotion for only 1 or 2 weeks. Approximately two-thirds of the patients required no further treatment after 3 to 4 weeks. Patients with hair loss required longer periods of application of the lotion. Hair loss accompanying dandruff ceased after a week of treatment in a few patients but usually only after several weeks. Seborrhea capitis with secondary infection in 5 patients was completely relieved in 1 to 4 weeks.

On the scalp, Sebizon Lotion behaved like a hair dressing. It flowed freely from the bottle and could be easily worked into the scalp and brushed through the hair. The color and texture of hair were not affected. No change occurred in the color of gray hair, nor did Sebizon Lotion affect the color of tinted or dyed hair. The color of hair, with ends burned by a vegetable tint, remained unaffected.

It was of interest that in some instances the scalp had become oily during the prolonged application of selenium sulfide. When Sebizon replaced this substance in treatment, the oiliness disappeared and the scalp remained clear.

Seborrheic dermatitis in 74 patients involved the scalp and body areas. There was concomitant hair loss in 2 patients and secondary infection in 2 others. Sometimes it appeared on the eyelids and in the eyebrows. When it was necessary in these cases to apply Sebizon around the eyes or to the eyelashes, it undoubtedly came into contact with the eye. However, no irritation occurred and no stinging was reported. Sixty-three patients (85 per cent) in this group were completely relieved, 9 improved, and 5 affected only slightly, if at all. The lesions sometimes commenced to clear within a week, but generally 2 to 3 weeks' treatment was required. Sometimes the response varied with the location of the dermatitis. Thus, lesions on the scalp might clear, whereas lesions on the forehead, ears, or sternal region might diminish but not disappear. There was 1 instance of irritation in a patient in whom Sebizon was applied for 6 weeks to the postauricular area. One obese man insisted on leaving moist the areas where lotion was applied. After 3 days a contact dermatitis developed where skin areas were in apposition. Obesity and improper application were the causative factors in this reaction.

Fifty-nine patients who came to me for treatment, and in whom I used Sebizon Lotion, had both of these diseases, that is, seborrhea capitis with seborrheic dermatitis of various body areas, including the axillae, and the pubic, perianal, and umbilical regions. The response in the various areas was not identical. Consequently, the responses were enumerated separately, and on that basis, a total of 51 patients (86 per cent) were completely relieved of both seborrhea capitis and seborrheic dermatitis. Twelve showed satisfactory improvement, and 1 was not benefited.

Sebizon Lotion also proved highly effective in bacterial infections of the skin. Among 167 patients the infection cleared in 140 (80 per cent), was markedly improved in 16 (9.5 per cent), and was not affected in 11. The conditions responsive included infected acne vulgaris, infectious eczematoid dermatitis, folliculitis, impetigo, peri-oral pityriasis simplex, pyoderma, infected scabies, sycosis vulgaris, and infected varicose ulcer. One patient with perlèche was only moderately benefited. Sebizon had to be discontinued in 1 patient with infectious eczematoid dermatitis after a week's treatment because of irritation.

Sebizon Lotion was applied by 15 patients with various types of multiple involvement with seborrhea, pyoderma, and dermatoses. Thirteen (86 per cent) of this group were completely relieved from the discomfort of the several conditions from which they suffered. The patients showing this response were affected as follows: seborrhea capitis with rosacea of the face, 1; seborrhea capitis, seborrheic dermatitis, and pyoderma of the axilla, 1; seborrhea capitis with pustular acne of the face, 3; seborrhea capitis with intertrigo of the groin and scrotum, 1; and seborrheic intertrigo with folliculitis of the groins, 1; seborrhea capitis with seborrheic folliculitis of the forehead, pre-auricular area, chest, and/or back, 4. In 1 patient seborrhea capitis and seborrheic dermatitis of the eyelids cleared within a month. The accompanying pustular acne of the face showed moderate improvement after 2 months' treatment. Sebizon Lotion proved to be a useful adjunct in its treatment. The response varied among affected areas in a patient with seborrhea capitis and seborrheic folliculitis of the chest and back. The scalp cleared; the folliculitis of the back and chest were moderately improved. Seborrhea capitis with perlèche in 1 patient improved during 2 weeks' treatment.

Three patients with psoriasis were treated. The groins in 1 patient were completely clear after 3 weeks, but psoriatic lesions remained on the legs and scalp. Two patients treated for 2 months showed little or no benefit. One patient with intertrigo of the inframammary region was completely relieved by 3 applications of Sebizon Lotion. Chafing disappeared after 1 week.

The rapid antipruritic effect of Sebizon Lotion was outstanding. Few medications act so promptly. Pruritus, burning, and stinging were sometimes relieved immediately and usually in less than a week.

The lotion proved cosmetically acceptable. No trace remained after rubbing it into the skin. Friends could not tell, for instance, that a patient's face was being treated.

No sensitivity reactions occurred. Irritation occurred in 3 patients. Irritation in 1 instance was due to improper application. It occurred in 1 patient only after continuous application of Sebizon Lotion for 6 weeks.

The disease under treatment recurred at various intervals after the cessation of Sebizon treatment in approximately 10 per cent of the 520 patients in my study. Each responded to application of the lotion a second time.

The antibacterial activity of sodium sulfacetamide was readily apparent in the bacterial cutaneous infections. The mechanism of action in seborrheic dermatitis was obscure because of the indefinite etiology of the disease. The effect of sodium sulfacetamide topically would make it appear that seborrheic dermatitis may be of bacterial origin.

The high percentage of satisfactory responses obtained in seborrhea capitis, seborrheic dermatitis, and bacterial cutaneous infections warrants the continued use of Sebizon Lotion in these conditions. The use of Sebizon Lotion in these conditions represents an advance in therapy.

## SUMMARY

The chemistry, antibacterial activity, and previous clinical uses of sodium sulfacetamide are discussed. Cutaneous sensitivity studies, including the incidence of irritation in clinical application, revealed a low index of cutaneous irritation.

The etiology of seborrheic conditions is reviewed, and seborrhea capitis and seborrheic dermatitis are described. The evaluation of sodium sulfacetamide, in 10 per cent concentration, used topically as a lotion proved highly effective in 520 patients with seborrhea capitis, seborrheic dermatitis, and pyoderma, alone or in combination.

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# MANAGEMENT OF THE PARANOID SCHIZOPHRENIC WITH PROMAZINE*

## Report of an Illustrative Case

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*Washington*

PATIENTS with paranoid schizophrenia are among the most difficult to manage of all the mentally ill. The prognosis is usually grave; rarely do symptoms respond even to such heroic measures as shock therapy or psychosurgery. The following case history suggests that suitable ataractic medication holds promise for such patients, despite the chronic nature of the disease and the apparent hopelessness of their condition.

### REPORT OF CASE

The patient, a white woman, now 46 years old, had been before her illness an efficient secretary. In 1938, at the age of 28, her disorder was definitely diagnosed as paranoid schizophrenia. She was discharged to her family with recommendation for institutionalization. The family, however, cared for the patient at home for 11 years, until, in 1949, they were compelled to commit her to a state mental hospital. For the next 5 years she remained completely withdrawn and inaccessible. She suffered frequent episodes of catatonia and mania and attempted suicide several times.

In June, 1955 treatment was started with Rauwolfia and chlorpromazine, 100 mg. 4 times a day. Rauwolfia was continued for 1 month and then stopped because of the appearance of a skin rash. Medication with chlorpromazine alone was continued, in a total daily dose of 400 mg. After 4 months of medication she exhibited a desire for contact with her family for the first time in 5 years. After approximately 6 months of treatment with chlorpromazine an excessive dryness of skin and scalp developed. The dose was then reduced to 300 mg. daily. She was released on trial in the custody of her brother (a physician) about 5 months later, despite the misgivings of her psychiatrists, who feared persistent suicidal tendencies. At this time she was receiving 100 mg. chlorpromazine 3 times a day. A pronounced parkinsonian syndrome had developed, with masklike expression, tearing of the eyes, and spastic gait; there was also marked dryness of the hair and scalp. She was in little or no contact with her surroundings, responded but slightly to external influences, and showed no interest in her personal appearance. She moved and acted like a robot.

Three days after release from the hospital chlorpromazine was discontinued, and promazine was substituted in the same dosage. In 10 days all signs of parkinsonism had disappeared and the dryness of skin and scalp had cleared. The patient began to take an interest in tidiness, was in contact with her environment, and asked for a typewriter, on which she practiced 1 hour daily. Her progress was remarkable. After 3 weeks on 300 mg. of promazine daily the dose was reduced to 100 mg. twice daily, administered on arising and at bedtime. She continued to improve, and 5 weeks after discharge she returned to her mother's home to live. She renewed old friendships, attended church regularly, enjoyed the theater, was interested in current events, had a phenomenal memory, and expressed a desire to resume work. She is not yet considered ready for employment, however. Throughout the past month the daily dose of promazine has been further reduced to 75 mg. daily, apparently without loss of her former gains. No side-effects of any kind have been observed.

*Conclusion.* As strikingly demonstrated in this case, promazine would seem to be the drug of choice for psychiatric medication in paranoid schizophrenia for the following reasons: (1) absence of toxic or other adverse reactions, (2) rapid disappearance of parkinsonian symptoms on substitution of promazine for chlorpromazine, and (3) increased awareness of the patient, without drowsiness. This is most important in obtaining the accessibility essential for adequate psychiatric evaluation.

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* Promazine hydrochloride is available as Sparine Hydrochloride from Wyeth Laboratories of Philadelphia, Pa.

# President's Page

## ANOTHER MILESTONE

New facilities at the Medical Society Building are nearing completion. They represent a major addition to our home, which was erected and dedicated in 1921. Remodeling of the property has been carried out to accommodate the changing functions of the Society. Three new, comfortably furnished, air-conditioned rooms designed to facilitate the work of our committees are located on the second floor. The basement has been renovated to make additional office space for the staff. In an adjacent room there will be a vault to house the Society's most important records. The Medical Bureau will continue to occupy a substantial portion of the first floor of the 1710 M Street property. Attractive apartments are located on the third and fourth floors.

A few weeks ago I inspected the progress of our building program with the House Committee. When I thought of the discussion, the planning, and the effort required for these renovations, I wondered about the activities of the Society in earlier periods. I learned that in 1817, 16 physicians, including nearly all those practicing in Washington and Georgetown, met at Tennison's Tavern on Pennsylvania Avenue and formed the present Medical Society. The charter was granted and approved by President Monroe 2 years later. Several unsuccessful attempts were made by the Society to procure a building of its own but this was not realized until 1921. An account of the early activities of the Society is given by Dr. Charles W. Richardson at the Dedicatory Exercises:

"During the period of one hundred and three years of the life history of the Medical Society it has been a nomad, like unto a travelling band, without home, shelter, or accumulated assets of any character. It has tarried here or there according to the exigencies of the case. . . . During this whole period of one hundred and three years it has never failed to have its weekly scientific meeting, excepting during the stress of the War of the Rebellion, and in response to the coal-saving act of the World War.

"How much greater would all these activities have been; how much easier to accomplish, and how much more impressive had they issued from an organization having such a home as we now possess!"

When I became a member in 1935 the Society was still holding its traditional meeting every Wednesday night, and I cannot forget the year I was Chairman of the Program Committee when it was my responsibility to secure speakers for these meetings. At that time the schedule called for a brief business meeting to be followed by 1 or 2 scientific papers. As the business of the Society became more complex, the business discussions lasted longer, and I recall several occasions when the guest speaker did not begin his lecture until 10 o'clock. Most of the business was carried out in the main auditorium by the general membership.

Many functions of the organization have shifted from the auditorium to the committee room. Material is assembled and reports are prepared for some 30 committees by the staff. The building has been remodeled to provide 3 new committee rooms and additional office space for the staff.

Credit for making the building program a reality is due not to a single individual—rather it is due to the foresight of the members, the officers, and the staff. However, without the sustained interest, the persistence, and hard work of Dr. W. Ross Morris and his House Committee it might still be on the drawing board.

At the next Executive Board meeting I shall recommend that an Open House be scheduled so that the members will have an opportunity to inspect the new facilities which represent another milestone in the progress of our Medical Society.

James W. Watts

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# Editorials

## THE ASIAN INFLUENZA SITUATION

Much has been written about the Asian Flu-Type A[1]. One can scarcely pick up a newspaper or listen to a news broadcast without being reminded of its presence. Some say it may paralyze whole cities, or even nations, if it pursues the course of a full-scale, major epidemic. Others say it is all much ado about nothing. From this conglomerate mixture of diverse opinions, what should we believe?

Obviously, in many ways, we are dealing with imponderables. The questions are somewhat similar to whether current radioactive fall-out is hazardous to the future health of the world; to whether routine yearly chest X-rays are injurious; to whether Russia will send its air force over our country to drop an atom bomb.

Despite this potpourrie of various facts, facets, and fanaticisms, rational thinking should lead us to rational action.

We know that this disease is caused by an A prime strain of influenza virus which is different from any previously identified strain. It has been isolated, and a vaccine has been produced which gives evidence of being as effective as one could reasonably expect from any such prophylaxis. This vaccine is in production now, and has been

*Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of The Medical Society of the District of Columbia.*

for several months; certain quantities have been released and already administered, even though of necessity subject to certain control; more and more vaccine will be produced in the not distant and still timely future, quantities increasing in a crescendo fashion day by day, week by week, month by month. We know now that manufacturers, local distributors, and physicians alike are to coöperate jointly to release and administer the product in a fair and equitable fashion.

This vaccine is analogous to and appears as safe as that used in the annual "cold shots" so many of our populace take year by year. The mechanism of culture and the vehicle in which the organisms are suspended are identical; the only difference is in the type strain, and these are killed viruses. The only contraindication that the experts predict is egg allergy. The satisfactory and reliable way to test for this is not by skin testing, but to merely elicit a response that the patient can eat eggs—that eggs agree with him. Patients with severe and multiple allergies will question their safety in receiving this vaccine. It is true that the highest incidence of reactions would occur in this group, because more of these people will be allergic to eggs than a non-allergic group. However, allergies are specific; one cannot deduce correctly that because Mr. Jones is allergic to chocolate, he is therefore allergic to eggs—if he eats and tolerates eggs, he is not, so far as can be reasonably ascertained. The ultimate decision, however, must be left to the patient (whether he desires the immunization) and the administering physician (to assess factors relating to tolerance). The vaccine is the only specific we have for dealing with the disease. Obviously, the greater the number of our population immunized, the lesser the severity and/or extent of any epidemic will be, if it should occur in this country.

The Joint Committee on Asian Flu now consists of the following members:

Dr. Daniel L. Finucane, District Director of Public Health, and Dr. Clifton R. Gruver, Co-chairmen; Drs. W. Montague Cobb, George Maksim, W. Robert Perkins, Monroe J. Romansky, and Mr. Theodore Wiprud, Executive Director, of the D. C. Medical Society; Dr. Frederick C. Heath and Mr. J. Edgar Caswell, of the D. C. Department of Public Health; Dr. Margaret E. Grigsby, of the Medico-Chirurgical Society of D. C.; Mr. Harold C. Kinner, of the D. C. Pharmaceutical Association; Mr. William M. Bucher, Executive Director of the Hospital Council of the National Capital Area; Mr. Walter O. Cromwell, Health Consultant, Health and Welfare Council of the National Capital Area; and Mr. Linnaeus T. Savage, representing the Washington Board of Trade.

The Committee has met frequently and for many hours since August 19. It has considered exhaustively not only the questions in the topical area of vaccine, but many other factors necessary in a total plan developed for the protection and best health interests of this community, should an epidemic emergency actually occur: factors such as the organization of stand-by plans, including hospital facilities, readiness programs for physicians, medical care in the homes, professional and non-professional nursing services, homemaker services, and recommendations regarding the protection and care of the medically indigent. The machinery for such planning has necessarily consumed time in effecting results; nevertheless, progress has been satisfactory despite the complexities of a task without precedent in many of its aspects. The Committee has been immeasurably aided in its functions by expert representatives of the Public Health Service, our own Medical Society, the Hospital Council, the D. C. Pharmaceutical Association, and many other organizations of the District of Columbia whose services relate to the problem.

Publicity, often combining fact with hypothetical surmisals, and frequently ill-timed, has stimulated the anxieties of the people to a fearful degree. "There is no cause for alarm." It has been said before and must be said again and again, but must be supported by reason.

FIRST MEETING OF JOINT COMMITTEE ON ASIAN FLU

The first meeting of the Joint Committee on Asian Influenza convened in the Medical Society's Board Room, August 19. Presiding was the Co-chairman, Dr. Daniel L. Finucane, District Director of Public Health, who is seated at the right end of the table; to his right is Dr. Clifton R. Gruver, Co-chairman and Chairman of the Medical Society's Committee on Public Health. To Dr. Finucane's left is Dr. Frederick C. Heath, of the District Health Department.

Next to Dr. Gruver (counterclockwise around the table) are: Dr. Monroe J. Romansky, Dr. Yates Trotter (consultant from the Public Health Service), Dr. George Maksim, Dr. W. LeRoy Dunn (President-elect of the District Medical Society), Mr. William M. Bucher, Executive Director of the Hospital Council of the National Capital Area, and Dr. W. Robert Perkins.

We live in a country blessed by a healthy populace, prosperity, good diet, modern medical advances, and extensive medical facilities. We are a jump ahead of most of the rest of the world in these respects. If an epidemic occurs, all indications are that it will be of low virulence. But we are not soothsayers or crystal-ball gazers, hence the need for a sensible program of preparedness. We have this added advantage over our ancestry—never before in the history of the world have a people had the benefit of an opportunity to prepare in advance of the descent of such a disease, with a specific measure of prevention, or even failing this, a confident ability to cope with the situation.

We, as physicians, should do our utmost to allay the anxieties of our patients, and for them place in the proper light information which heretofore has only tended to confuse and frighten them.

We shall continue to develop our programs of preparation, as far as time and available resources will allow.

Clifton R. Gruver, M.D.
*Chairman, Committee on Public Health,*
*The Medical Society of the District*
*of Columbia*

## ARE "DROPS" IMPORTANT IN AN EYE EXAMINATION?

One of the most frequent questions asked of the ophthalmologist is "Why do you dilate the pupils when you examine my eyes? The 'doctor' in the jewelry store doesn't." Unfortunately, we often brush off the question as being too unimportant or too stupid to deserve our answer. This is not true. The use of cycloplegic drops is important, and the understanding by the medical profession and public of why they are necessary is even more important.

Cycloplegics and mydriatics serve two very important purposes. One, they make the viewing of the lens, vitreous, optic nerve, and retina much easier. This is particularly important in suspected cataract, optic atrophy, choked disk, and retinal or vascular disease. Many older individuals have a small pupil which contracts even further when subjected to the ophthalmoscope light, thus making an accurate view of the fundus impossible.

Two, the ascertaining of the refractive error is made much easier when the accommodation is put at rest with a cycloplegic. Then the total amount of astigmatism, hyperopia, or myopia is made manifest, and the prescribing of the proper glasses simplified.

Of special importance is the use of cycloplegics in the examination of children. Viewing the child's fundus is often impossible through the active, undilated pupil but much easier when the pupil is well dilated. Further, because the child is often unable to offer subjective aid in the examination for glasses, objective examination must be relied upon. In the small child, only by the use of a cycloplegic and retinoscopy can the refractive error be determined and the vision properly corrected or the strabismus compensated for by the proper glasses. "Drops" are very important in the examination of the child's eyes.

A word of caution is indicated. The adult who may have unsuspected glaucoma should be dilated with caution and usually after determining the intra-ocular tension with a tonometer. Acute attacks of glaucoma have been precipitated by the incautious use of cycloplegics. However, their importance fully justifies their use with proper precautions.

A final word is in order. The optometrist is prohibited by law from using drugs, since only a doctor of medicine may give or prescribe such medication. Not only is the use of a cycloplegic by an optometrist illegal, but it seems probable that it is unwise for physicians to prescribe or administer a cycloplegic for a subsequent examination by an optometrist. Should glaucoma develop and not be recognized, the physician is legally liable and not the optometrist.

It is, then, evident that cycloplegics are a valuable aid to the complete eye examination when used with due caution by a competent examiner.

F.D.C.

## OCCUPATIONAL HEALTH PROGRAMS

The Nation's Capital is not regarded as an industrial city, but primarily as the center of activity of our Federal Government. As such, the residents of the Washington Metropolitan Area are not considered industrial workers in the usual sense of the term—as applied to employees in the heavy industries, for example. However, the increasing numbers of people in the city's total work force and the decreasing numbers of persons seeking unemployment assistance stress the point that ours is a community of workers.

The House of Delegates of the American Medical Association in June of this year adopted a statement of the "Scope, Objectives, and Functions of Occupational Health Services." This statement defines an "occupational health program" as "one provided by management to deal constructively with the health requirements of employees and employers in relationship to employment." It further states: "Although health maintenance is primarily the responsibility of the individual, an occupational health program represents management's recognition of its obligation to provide a safe work environment and its opportunity to promote better health among its employees."

Since Washington is a city of workers and in view of the preceding statement by the AMA, it is of more than passing interest to study the reports of Reed and Coffin in this and the September issue of the Medical Annals in which they have provided us with an informative survey of employee health services in non-governmental establishments in the Washington Metropolitan Area. The Committee on Industrial Health of the Medical Society of the District of Columbia has long been interested in a survey of this kind and is indebted to Dr. Reed and Mr. Coffin for their contribution in this area.

Occupational health programs in the United States had their origin about the middle of the 19th century, when some employers established medical services to meet employee needs where

AMA'S NEW RADIO COMMUNICATIONS COMMITTEE

A new committee established by the American Medical Association, to be known as the Radio Communications Committee, met at the Jefferson Hotel in Washington, September 6, 1957, for its initial organization meeting. Dr. Allen S. Cross was elected Chairman. Among those present was the Honorable John C. Doerfer, Chairman of the Federal Communications Commission.

Seated (left to right) are: Dr. Robert R. Mustell, Chicago Ill.; Dr. Elmer C. Rigby, Los Angeles, Calif.; Mr. Doerfer, Dr. Cross, Dr. Rodney S. Starkweather, Evanston, Ill.; Dr. Frank W. Woolsey, Jr., Associate Dean and Director of Postgraduate Education, Albany Medical College.

Standing (left to right): Mr. Carroll White, of the Electronic Industries Associates; Dr. William J. Kennard, Assistant Director, Washington Office, AMA; Mr. Theodore Wiprud, Executive Director of the Medical Society of the District of Columbia; Dr. Herbert P. Ramsey, Chairman of the Executive Board of the Medical Society; Mr. Lawrence A. Zupan, Assistant Secretary of the Medical Society; Dr. Cyrus H. Maxwell, Assistant Director, Washington Office of the AMA; Mr. Jesse H. Ford, Jr., of the Public Relations Department, AMA Headquarters; Mr. Curtiss B. Plummer, Chief of Safety and Special Radio Services, FCC; Mr. John T. Kelly, Legal Counsel for the American Hospital Association; Mr. William McAuliffe, of the Legal Department, AMA Headquarters; Dr. James W. Watts, President of the Medical Society; Mr. Paul Donelan, of the Washington Office, AMA.

medical facilities and services were either inadequate, unsatisfactory, or lacking. Impetus to further development was provided by the enactment of laws in the various states requiring employers to provide safe and healthy environments for their workers and to compensate employees for disability or death arising out of or during the course of employment.

The provision of occupational health programs designed to prevent illness and injury and to encourage comprehensive health maintenance on a sound preventive health basis now has widespread acceptance within industry. The status of the physician in industry has been strengthened through Board certification of occupational medicine as a subspecialty under the American Board of Preventive Medicine. The role of the industrial physician and the employee's personal physician in the total care of the patient has been well established; their relationships and pathways of communication and understanding have been clearly defined.

The wide variation in the kinds of occupational services provided non-governmental employees in this city is highlighted by the reports of Reed and Coffin. The differences in the numbers of medical and allied professional persons employed by the various groups, the extent of the services provided, and the wide range in costs are of significance. This raises the question as to whether these monies are always wisely allocated in terms of services rendered. The reports also raise doubts as to the adequacy of medical supervision in all cases. For example, should a nurse run a clinic solely under lay supervision and without an official physician advisor or consultant? Is lip service only being given to in-plant medical services by the occasional appearance of a physician?

Good occupational health services demand careful planning on the part of management and its medical advisor. Such services have been reported repeatedly as being a significant factor in reduction of accidents and compensation costs, lowering of sickness and absence rates, reducing employee turnover, and increasing employee morale and efficiency. Properly conceived and administered, such services are good business; they are mutually profitable to the employers, the employee, and the consumer.

Dr. Reed and Mr. Coffin have, in essence, offered a challenge to employers in this city to take a fresh look at their health services (or lack of health services). They have challenged the local medical profession to review its responsibility in this area. Occupational health services can make a real contribution to community health. The Committee on Industrial Health of our Society is available to all groups wherever it may be of assistance in this field of medical practice.

R. Lomax Wells, M.D.
*Chairman, Committee on Industrial Health*

# In and Out of Focus

BY THE OBSERVER

***Cancer Morbidity Review Board*** Another attack on cancer will be undertaken by the Society in coöperation with the District of Columbia Division of the American Cancer Society in the very near future. What will be known as the Cancer Morbidity Review Board was recently approved by the Society's Executive Board.

Establishment of a review body has been under consideration by the Committee on Cancer Control for over a year. Its Chairman, Dr. Herbert M. Giffin, had devoted considerable time to the investigation of similar ventures elsewhere. Organization of a review body, however, was not seriously considered until a communication was received from Dr. J. Keith Cromer, President of the Washington Gynecological Society, and now Chairman of the Committee on Cancer Control, urging that immediate steps be taken to establish the Cancer Morbidity Review Board.

In a communication dated April 15, 1957, Dr. Cromer wrote the Executive Board as follows:

> "During the past year serious consideration has been given to the formation of a Cancer Morbidity Review Board in the District of Columbia as a means of improving cancer diagnoses and management. The precedent for such a project has been established in Philadelphia, where the Committee for the Study of Pelvic Cancer was organized in 1945 with the approval of the Philadelphia County Medical Society. Subsequently, committees were established for the study of breast and lung cancer. In Baltimore a Pelvic Cancer Review Board was set up in 1951 under the authorization of the Medical & Chirurgical Faculty of Maryland with the coöperation of area hospitals, medical schools and the state health department. In each instance, financial support was obtained from the local division of the American Cancer Society.
>
> "On September 18, 1956, Dr. John Y. Howson, Chairman of the Philadelphia Committee for the Study of Pelvic Cancer, came to Washington to discuss setting up a program similar to his own with the Committee on Cancer Control of the Medical Society of the District of Columbia. Recently, the Washington Gynecological Society considered the proposal for such a review board in pelvic cancer, and voiced its accord and willingness to further its development. The District of Columbia Division of the American Cancer Society has expressed its willingness to grant funds in support of such a project and recommended that a project application be submitted requesting the funds required for this purpose."

As previously stated, the Executive Board has endorsed the establishment of the Cancer Morbidity Review Board. Recently, the project application was granted, and Mrs. Virginia C. Fidler, now connected with the Garfield Memorial Cancer Detection Clinic, was employed on a part-time basis for the purpose of gathering data. Her compensation and expenses incidental to employment will, of course, be paid out of the grant.

Because the establishment of a permanent review board will require an amendment to the Constitution and By-laws, it has been proposed by the Society's Committee on Cancer Control that it assume the duties of such a board temporarily. At the time this was written the matter had not come before the Executive Board, which is to hold its meeting on September 23, 1957.

This forward-looking program is further assurance that the Medical Society of the District of Columbia is determined to do everything in its power to combat the most destructive killer of our time.

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### *What Kind of Man?*

In 1929, when your Observer first became a medical society executive, he was one of about 20 laymen in this field. By 1955 there were 188, most of them being employed by state and county medical societies. Since that time their number has substantially increased.

This wide acceptance of the laymen by medical organizations has been a heart-warming experience to the pioneers. For, in the beginning, they were looked upon with considerable skepticism, if not hostility, by many physicians. How much times have changed is shown by the confidence now reposed in them by the organizations they represent.

What has impressed the interested Observer most has been the variety of their talents and the seriousness with which they take their duties. No two of them make the same approach to their work. With very few exceptions, they have been diligent—often working much longer hours than those holding comparable positions in other fields. Not a few have shown exceptional administrative ability and skill in public and professional relations. Some have demonstrated initiative and imagination of a high order.

What prompted these observations were conversations which your Observer had with several members of the AMA-sponsored Medical Society Executives Conference which met in New York last June. He was impressed not only by the enthusiasm of those present but by the feeling often expressed that their vocation was one of great responsibility and trust.

Upon reflection, it occurred to your Observer that his views on the medical society executive might be of interest to readers of this column. Although they are of a personal nature, they are largely based on experience and observation over many years.

Administrative ability in an executive is, of course, taken for granted. Certainly, no one should be considered for such a position unless it is known that he possesses it. Other qualifications, in the order of their importance, are: integrity, imagination, tact and drive. These are essential if an executive is to do a first-class job.

It may take a little time, but members sooner or later discover whether the executive can be trusted. If it is discovered he cannot, he may not lose his job, but his usefulness will be seriously impaired, for confidences will frequently be entrusted to him. Should he violate them, there is a black mark which is difficult to erase.

Your Observer prizes the trust in his integrity more than anything else connected with his position. It gives him a sense of satisfaction that officers have shown no concern for the welfare of the organization from an administrative standpoint, and that members feel they can come to him with their problems in the full knowledge that he will not only endeavor to be helpful but will not disclose what he learns to others unless given permission to do so; that the advice he gives will always be objective and, as he sees it, in the best interests of the individual as well as the group.

The degree to which an executive possesses imagination and initiative will, to a large extent, determine his value to the organization. It is not enough that he do a competent management job. He must intuitively sense opportunities for constructive action and be capable of bringing them to fruition. It may be a project which will benefit members directly or make it possible for them to provide better service to their patients. Whatever it is, it is usually the product of the creative mind of the executive and his ability to follow through.

In your Observer's experience, getting along with people is no real problem. It is to him a matter of judgment in dealing with groups individually and collectively. There are certain subjects which the executive had better not discuss. For example, it may be a controversial matter of policy or fees for professional services, which is always a touchy subject. Common sense should dictate when he should or should not speak. Some may criticize him for being vacillating, but those who give the matter serious thought will understand and approve such a course.

The executive is, of course, a link between succeeding administrations. It falls to him more than any other officer to maintain continuity in the organization's program. It is his task to create better relations between the people in the community and his organization. He should also be in a position to interpret public opinion to physicians better than any of their own number can.

Naturally, it is the hope of every conscientious executive that, as the years pass, his value to his organization will increase. When for one reason or another his services are terminated, he earnestly hopes it will be said that he has made at least a modest contribution to the welfare of the medical profession and the community.

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### *Boxing Injuries*

Boxing in this country has always been one of the most popular spectator sports. Since the advent of television, a vast audience views weekly "fights" which have for their object not only the demonstration of fistic skill but the temporary disablement of one or both of the participants.

To those fascinated by these exhibitions, they are an entertaining and sometimes a thrilling spectacle. Others regard them as brutal and degrading. The physical and mental incapacities which frequently result should, in their opinion, condemn them.

Those who take the latter view will find strong support in an article by Dr. Macdonald Critchley,[1] entitled "Medical Aspects of Boxing, Particularly from a Neurological Standpoint," which appeared in the *British Medical Journal*. However, Dr. Critchley insists that the facts presented by him do not constitute a plea either for or against pugilism. In fact, he believes that amateur boxing fulfills many useful purposes, sociologic as well as personal. Whether the benefits outweigh the drawbacks is a question. Professional pugilism, he says, is quite another matter. In proof of dangers in this field, he enumerates some of the principal ill effects with emphasis on the neuro-psychiatric deterioration which may develop. Here are some of the "accidents" which Dr. Critchley reports:

> "The 'knock-out'—[this is usually] the result of a violent blow to the point or side of the chin. The victim collapses heavily and remains immobile or inert for a matter of seconds or minutes. . . . In falling, the head may forcibly strike the ground, thereby producing a second and direct injury to the head which of itself may complicate the clinical picture. If the boxer is rendered so helpless as to be unable to regain the erect stance within 10 seconds, he is 'counted out.' After a knock-out blow most boxers are able to leave the ring within a minute or two, though ordinarily with the help of their seconds. Longer periods of powerlessness, or of unconsciousness, are by no means unknown, however."

There are other knock-out punches such as the "solar plexus knock-out" which is usually not followed by unconsciousness; the "heart knock-out" which "on occasion has proved fatal"; blows to the side of the neck which are called "carotid sinus knock-out"; foul punches, such as the rabbit punch to the nape of the neck; blows "below the belt" and "kidney punches."

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[1] CRITCHLEY, M.: Brit. M. J., 1957, no. 5015, 357 (February 16).

The "classical knock-out blow" is delivered to the "button"—that is, "the point of the chin."

Other more or less serious causes of disablement are ruptured muscles, fractured arms, arteriovenous aneurysm, vomiting ("athlete's sickness"), injuries to the eyes, and direct damage to a nerve. What are described as occupational marks of the pugilist are cauliflower ear, the flattened nose, hypertrophied superciliary ridges, and arthritis of the first metacarpophalangeal joint.

Fatalities, Dr. Critchley states, are not frequent nor are they too uncommon. This is borne out by the fact that, up to the end of 1950, 207 fatalities had been recorded. Nearly all of the deaths were due to subdural hemorrhage but some to intracerebral bleeding. At times a heavy fall on the back of the head in the ring was responsible rather than a blow to the face.

More frequently physical and mental deterioration is the direct accumulated result of a pugilistic career. The term popularly known as punch-drunkenness is most prevalent. Surprisingly, this term was first used as recently as 1928. It is now established in medical terminology.

> "Punch-drunkenness," Dr. Critchley writes, "is much commoner among professionals than among amateurs. It is commoner in second-rate or third-rate performers than in the intelligent scientific exponent with a championship title. It is very rare in colored boxers. As fighters, the punch-drunk ex-pugilists have been slow on their feet rather than nimble, and notorious as being able to 'take it.' They can perhaps be looked upon as 'sluggers' rather than scientific boxers. Punch-drunken states have been found in fighters of all weights, but most characteristically in small men who have not been particular about the size of their opponents, having often taken on contestants heavier than themselves."
>
> "Among mental symptoms [of punch-drunkenness] there is the slow appearance of a fatuous or euphoric dementia with emotional lability. The victim displays but little insight into his deterioration. Speech and thought become progressively slower. Memory deteriorates considerably."

Groggy states are midway between the knockout and punch-drunk states. "As the result of severe battering sustained during a particular contest, the victim develops a mental confusion with subsequent amnesia, together with an impairment in the speed and accuracy of the motor skill represented by the act of boxing. The affected pugilist may continue to fight, but in an 'automatic fashion.'" The patient in a groggy state becomes "feeble and uncoördinated" and becomes "inefficient and vulnerable." In other words he is "out on his feet."

Dr. Critchley thinks that if any real cerebral damage has occurred the condition is often temporary. However, repeated lapses into this state may lead to a permanent punch-drunken clinical picture.

In light of the above, it would seem that few people would find enjoyment in a sport with such danger "to life and limb." Nevertheless, boxing continues to flourish. Most people, it appears, like to see a good fight regardless of what happens to the participants.

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### *Safe Journey to Old Age*

Ours is not only a youthful country but one which worships youth. Evidence of this is to be seen on every hand—in the manner of dress, behavior and thinking. It is reflected in newspapers, magazines and the books we read, and what we hear on radio and see on television. Well aware of the common desire to hold fast to youth, advertisers have gone all out in meeting the demand for any product, wearing apparel or what-have-you that will make the individual look more youthful.

Somehow it appears we cannot bear the prospect of old age, although we are conscious of the fact that it is inevitable. How then can we make "a safe journey to a normal and happy old age?"

Writing in *The Lancet* (London), Dr. Thomas Rudd[1] warns that it is not easy:

> "Anyone with experience of children, or having insight into his own mind recognizes the psychological difficul-

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[1] Rudd, T.: Lancet, 1957, 1, 895.

ties inherent in growing-up, and indeed in passing from any stage of life into the next. We cling, not unnaturally, to what we have, to the safety and comfort of the present, and draw back from the unknown tomorrow, with all its possible dangers. The child, however much it may long to spread its wings, enjoys the advantages of shelter and may cling to childish attitudes, even when the responsibilities of early maturity are offered. The child may well be afraid of life, but many years later, when it has accustomed itself to responsibility, it may be reluctant to surrender it. The fear now is not of living but of renunciation and of dying. As Jung says: 'His neurosis comes mainly from his clinging to a youthful attitude which is now out of season,' and the basic fear derives from the false premise that only the mature state is desirable, and that old age means only decline and waiting for death."

"The promises of maturity are glittering enough to the adolescent to make the adventure into manhood or womanhood attractive. The promised joys of old age are considerably less inviting to the materialist which is in most of us. It is not surprising that many of us 'stick,' unaware that, by refusing normal development and clinging to outgrown attitudes, we are inviting frustration.

"This difficulty has been created by man himself. When a civilization places so great an emphasis on material success, puts the zenith of life in the sixth decade, and refuses employment to anyone past the middle 60s, it produces old people who have been split off from the main stream of life, and a mass of neuroses among those who are still active but who dread being relegated to the have-beens.

"As a result of this approach life has become truncated, as it were, in the 60s, after which useful development is restricted and the value of life denied. Such an attitude is contrary to the Christian conception of the wholeness of life: every stage of life should be characterized by its own appropriate activity; each has its own lessons to be learned, its own contribution to make to communal life, as well as its own dangers to be faced. The activity of infancy is not that of later childhood, nor is that of adolescence the same as that of maturity. Anyone occupied in the activities of age-groups other than his own shows up his own abnormality. Progress in development is made by surrendering the attitudes and characteristics of the former stage for those of the succeeding one. Old age has its own characteristics, and it is the old people who show only characteristics of the earlier age-groups that should be regarded as the 'abnormals.' "

"Old age challenges mature man to give up middle-aged attitudes in favor of more seasonable ones. If the challenge is faced squarely, the attitudes of old age will bring with them a new and different kind of happiness."

But, as is true of all worthwhile things we wish for in life, there is a price and Dr. Rudd observes that in later years the "willingness to renounce is perhaps the prime (and often the hardest) lesson to learn, including as it does not only the surrender of responsibility and authority, normal to maturity, but also the gradual loss of companionship of one's own age-group, the impairment of vision, hearing, and powers of movement and thought. Against this background of renunciation the mind becomes detached from material things and each individual finds a meaning of life valid for his personality. In this mental development, which, for most people at least, cannot take place until old age is reached, lies the value to the community of its older members. The wisdom of simple experience can leaven the whole community, and show that the meaning of life transcends material success and ambition, and that true happiness is independent of both. A community without these values is poor indeed."

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### *". . . A Very Respectable Opponent"*

Courage and optimism are undoubtedly qualities which physicians appreciate most in their patients. It gives them the lift they so often badly need in dealing with the sick. Conversely, the pessimist who sees nothing ahead but disaster compounded can deplete even the most sanguine practitioner. Obviously, in such circumstances, he cannot do his best for the patient unless he is made of unusually sturdy stuff. In between these extremes are, of course, all shades of human nature. By and large, they challenge the best that the physician has to offer.

These reflections were prompted by an article, entitled "The Patient Who Won't Get Well," by Dr. Donald W. Hastings, which originally appeared in *Minnesota Medicine*.[1]

"This patient," Dr. Hastings writes, "usually presents herself (I use the feminine gender advisedly, since in my own experience most of the patients have been women) to the doctor with a number of physical complaints, and the symptom of overwhelming fatigue is usually among them. The attitude of the patient is that of the sufferer who has borne her heavy load with great courage and fortitude. Another feature that is evident if watched for is the large measure of hostility and anger, usually expressed indirectly and with a smile, that this patient carries.

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[1] Condensed in Am. Pract. & Digest Treat., 1957, 8, 417.

"For the first week or two, whatever the diagnostic studies done and treatment given, this patient gets somewhat better. Then, regardless of treatment employed, symptoms begin to return and the road begins to get rocky. The complaints increase in area and depth, the patient is crippled, the family is upset, and so is the doctor. He cannot find anything of enough importance pathologically to account for all the symptoms.

"At about this point the patient begins to show an uncanny ability to make the doctor feel as if it were all his fault somehow, and the screw is given another turn. The physician is in a particularly difficult position if he has performed an exploratory laparotomy because of the patient's abdominal complaints. He knows the belly was all right when he was inside of it two weeks previously. 'Are the symptoms due to something I did?' thinks the surgeon. 'After all, she was without any symptoms for a good ten days. Are these symptoms due to adhesions caused by the surgery?' If this thought is annoying enough and the patient and her family desperate enough, the physician may go back for another look, or more likely another doctor will. This is the patient who may have several scars on her abdomen—perhaps three or four.

"Sooner or later, although not always, the physician senses he is up against a very respectable opponent. He intuitively begins to realize that the patient is determined to hang on to every symptom; to carry on guerrilla warfare; to find the weak spots and exploit them; and all in all to demoralize the doctor and his doctoring, all the time suffering and remaining extremely miserable. But patients do not play such bruising games without reason. . . ."

As a result, the patient "degrades former physicians and flatters the one in front of her. She often will tell neighbors and others that Doctor So-and-So down the block is not entirely competent, or that patients are treated badly at the Such-and-Such Clinic or at the University, et cetera."

There are frequent misunderstandings between physicians which, in Dr. Hastings' opinion, might have been avoided if there had been a closer relationship where their patients are concerned.

What are the causes of such behavior? Dr. Hastings says that several "neurotic mechanisms" are at work. "The hostile dependent quality (both the hostility and the sticky dependency are marked) is often regarded as deriving from a strict, rigid childhood background in which the child was made fearful of displeasing anyone, but made angry by such rigid limits; however, the anger could never be openly expressed lest the child be punished further."

". . .Perhaps the most mature relationship this patient ever makes with anyone is with the doctor. She can pay a fee for the dependency she feels and hence has some measure of control over it. In turn, she can sense some security in feeling that a parent-like figure, the doctor, wants to help."

Dr. Hastings' advice to the physician who has a patient of this type under his care: ". . .Be a kindly but firm parent who can be respected" and "protect the patient from her own hostile aggressive impulses . . . not be visibly upset either by her seductive behavior or by her anger."

T. W.

DIABETES DETECTION DRIVE

November 17–24

Help Discover "The Unknown" Diabetic

# TWELVE REPRESENTATIVE IN-PLANT HEALTH SERVICE PROGRAMS IN THE WASHINGTON, D. C. AREA*

LOUIS S. REED, Ph.D., *Health Economist*
JAMES C. COFFIN, B.S., *Statistician*

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As part of a study of in-plant health services in the Washington area, 14 concerns were personally visited.† The company's physician and/or nurse(s) and, in some instances, the personnel director, were interviewed and data obtained on the history of the in-plant health service, the personnel and facilities involved, the types and volume of services provided, the cost of maintaining the program, and its over-all value. Data were also obtained on the company's hospitalization, surgical and medical insurance programs, if any, and the relation of these programs to the in-plant health service.

This article describes the in-plant health services of 12 of the 14 concerns visited.‡ Included were 3 manufacturing companies, a hospital, several public utilities, a department store, an insurance company, a newspaper, and a publisher. Four of the establishments had from 240 to 1,000 employees, 4 between 1,000 and 2,500 employees, and 4 over 2,500 employees.

The in-plant health service programs of these concerns, while having a family resemblance, were each different. These variations arose partly out of the differing nature of the organizations, the work activity, and the type of personnel employed. However, in a good part they also stemmed from differences in managerial philosophy, that is, the importance management assigned to keeping their employees in good health and their willingness to spend money for this purpose.

## Personnel Involved

Table 1 shows the approximate number of employees at each concern, the number of physicians and nurses employed, the total physician and nurse hours per year, and the physician and nurse hours per year per employee. Typically, these programs involve the part-time services of a physician (only 1 concern had full-time physicians) and the full-time services of 1, 2, 3 or more nurses. Two concerns at the time of visit employed dentists who served employees on a reduced charge basis; 1 of these has since discontinued this activity.

Of the 3 concerns shown as not having a full- or part-time physician, 1 was a hospital where the nurse performed her duties under the immediate direction of the resident physician or intern currently in charge of the emergency outpatient service. Another was an insurance company where the nurses worked under the general supervision of the medical director, whose primary function was the examination of applicants and applications for insurance. The third concern employed a physician on a retainer basis to examine new employees, the examinations being performed at his office; another physician, who received no salary, spent several hours a week at the plant caring for injured employees on a workmen's compensation fee basis and treating other employees on a private basis.

The annual number of physician and nurse hours per employee would seem to be a significant index of the "intensity" of in-plant health services. It will be seen that the ratio varied widely among the surveyed concerns. Thus, the annual number of physician hours per employee ranged from a low of 0.1 to a high of 0.9. Similarly, the annual number of nurse hours per employee varied from 0.9 to 8.3. The combined number of hours of physician and nurse time per employee ranged from 0.9 hour per employee in 1 concern to 9.0 hours in another—10 times as much.

In the case of some concerns these figures may not reflect the real situation. The extent to which employees utilize an in-plant health service depends in considerable measure upon their proximity to the health unit. Where all the employees of a concern are concentrated in a single location and it requires only a minute or two to get to the in-plant health service, considerable use, other things being equal, will be made of the in-plant health service. On the other hand, a concern may have only a small portion of its employees at its headquarters building at which its health unit is located, the other employees being dispersed in small scattered units or spending most of the day in outside activities, such as driving vehicles and making customer calls. The average number of nurse- and physician-hours per employee for such concerns may, in reality, be relatively high for workers stationed at the central location and low for workers away from this location.

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* This is the second of two articles dealing with employee health services in the Washington area. The first appeared in the September issue of the Medical Annals.

† The concerns were selected primarily in order to give a familiarity with in-plant health services in all types of concerns and organizations. The units selected are certainly representative of the larger organizations in the Washington area.

‡ Of the 2 other concerns, 1 was a railroad, the great majority of whose employees were outside the Washington area, and another was a railroad subsidiary whose in-plant health service covered an indeterminate number of employees. Both of these were regarded as atypical for the purposes of this study.

## ADMINISTRATION

In 7 of the 12 services the person directly in charge of the program was either a full- or part-time physician. In 4 programs the person administratively in charge was a nurse and in 1 program the safety director.

In 7 of the 12 units the person in charge reported to the director of personnel, although in some instances the medical director would have no hesitancy in going to top management on a matter of high policy; in 2 instances the person in charge reported to the director of safety, and in 3 instances to a vice president, usually the vice president in charge of personnel.

## SPACE AND EQUIPMENT

The space occupied by the in-plant health service varied from a minimum of 1 room to many. Typically, the unit consisted of a reception room, a treatment room, an examination room for the physician and/or an office for the nurse, and 1 or 2 rooms with beds.

The usual furniture and equipment in the units consisted of an instrument and medicine cabinet, a

TABLE 1

*Medical and Nursing Personnel in Relation to Number of Employees at 12 In-plant Health Services in the Washington Area*

| Concern | Number of Employees | Physicians | | | | Nurses | | | | Total Physician- and Nurse-hours per Year per Employee |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | | Total Hours of Service per Year | Total Annual Hours per Employee | Number | | Total Hours of Service per Year | Total Annual Hours per Employee | |
| | | Full-time | Part-time | | | Full-time | Part-time | | | |
| Under 1,000 employees | | | | | | | | | | |
| A | 240 | 0 | 1 | 156 | 0.7 | 1 | 0 | 2,000 | 8.3 | 9.0 |
| B | 340 | 0 | 1 | 312 | 0.9 | 1 | 0 | 2,000 | 5.9 | 6.8 |
| C | 800 | 0 | 0* | 0 | 0 | 1 | 0 | 2,000 | 2.5 | 2.5 |
| D | 900 | 0 | 0* | 0 | 0 | 2 | 0 | 4,000 | 4.4 | 4.4 |
| 1,000-2,500 employees | | | | | | | | | | |
| E | 1,300 | 0 | 1† | 520 | 0.4 | 1 | 0 | 2,000 | 1.5 | 1.9 |
| F | 1,850 | 0 | 1 | 208 | 0.1 | 3 | 0 | 6,000 | 3.2 | 3.3 |
| G | 2,200 | 0 | 0‡ | 0‡ | 0 | 1 | 0 | 2,000 | 0.9 | 0.9 |
| H | 2,400 | 0 | 1 | 260 | 0.1 | 2 | 0 | 4,000 | 1.6 | 1.7 |
| Over 2,500 employees | | | | | | | | | | |
| I | 2,600 | 0 | 2 | 1,040 | 0.4 | 1 | 0 | 2,000 | 0.8 | 1.2 |
| J | 3,000 | 0 | 5 | 780 | 0.3 | 6 | 0 | 12,000 | 4.0 | 4.3 |
| K | 5,000 | 0 | 1§ | 260 | 0.1 | 8 | 2 | 18,000 | 3.6 | 3.7 |
| L | 9,000 | 2 | 3 | 7,280 | 0.8 | 12 | 0 | 24,000 | 2.7 | 3.5 |

* Physician(s), employed for other purposes, supervises program.

† Also employs a full-time dentist who serves employees at reduced fees.

‡ This concern employs on a retainer basis 1 physician who makes preëmployment examinations on employees at his office. Another physician spends 5 hours weekly at the plant but receives no salary. He treats work injury cases at workmen's compensation fees and provides medical care to employees on a private basis.

§ At time of visit also employed 2 dentists, 1 virtually full-time and 1 for a few hours a week, who served employees at reduced fees. This activity has since been terminated.

sink, table, stool, and if there was a physician, an examining table. Three of the units possessed an electrocardiograph machine and 2 had resuscitator equipment. None had an X-ray machine primarily for the use of the in-plant health service. (At the hospital and the insurance company the X-ray equipment utilized for patients and for examination of applicants for insurance could also be used occasionally for employees.) The in-plant service of 1 manufacturing concern contained a diathermy unit, and 2 other units had heat lamps. Two had equipment for the testing of visual acuity.

## SERVICES PROVIDED

All of the 12 concerns, with perhaps 1 exception, did preëmployment or preplacement examinations on new employees. The purpose of the examinations is to avoid hiring workers who are or will be unable, because of their health, to perform the duties involved, and also to avoid taking on persons who will be bad risks from a compensation standpoint. At least 1 concern and possibly 2 in providing for preemployment examinations had in mind avoiding the hiring of persons who would be bad risks from the standpoint of the concern's group life, disability and medical insurance program. One concern limited the physical examination to the taking of temperature. At most of the concerns the examinations were performed on the premises by the company's medical director and were part of the duties for which the doctor was paid his salary. However, 2 companies paid the physician a specified fee for each preemployment examination performed.

All of the in-plant health services provided some care for work injuries. In some instances this care amounted to the provision of first aid, the employee being sent, whenever a physician's services were required (the plant physician being at the plant only a few hours a week), to a hospital emergency room or to the physician designated by the insurance company that carried the firm's compensation insurance. In some instances the company's physician would provide these services and would charge workmen's compensation fees for all services performed.

Of the 12 companies at least half were self-insured, i.e., carried their own compensation risk. In most of these companies the medical department provided whatever services it felt qualified to provide to the injured worker. Where hospital or specialist care was required, the company's medical director would select the physician to give the service and would make the necessary arrangements with him.

All of the in-plant health services provided care for minor nonoccupational illnesses and injuries. In general, these services were limited to those which would enable the employee to stay on the job and for which he would not ordinarily go to see any physician. This care included treatment of colds and sore throats, bandaging of minor cuts and bruises, care of insect bites, and bed rest for employees not feeling well.

An important service rendered by virtually all of the health units is employee health counseling. The major share of such counseling was generally borne by the nurses. It consisted of a willingness to listen to an employee's problem—which may or may not be related to his work—and to assist him in reaching a solution. Counseling may involve such problems as what to do when a member of a family is drinking too much, what health service to seek for a member of the family who is ailing, where the employee can obtain health services that he feels he cannot afford, whether a given doctor's charge is a fair one, to what physician or specialist the employee should go, and whether or not he had a condition requiring the services of a physician. It is felt that much of the undoubted need for this health counseling is due to the fragmentation of present-day medical care; i.e., health services must be obtained from so many different sources. In some of the establishments visited the nurses and physicians thought that only a small percentage of the employees had a family or personal physician; at other establishments the opposite opinion was held.

Several of the concerns employed only office workers, and their work involved no health hazards. At some concerns the plant physicians endeavored to inform themselves about the work processes and to advise the concern about those which might involve a health hazard. At other companies the physicians paid little attention to this and, in fact, rarely ever set foot in the plant.

Four of the concerns had arrangements for examination of all employees who had been out sick for more than a few days, or who had had an operation, to assure that they were fit to resume their duties.

Another concern performed these "return to work" examinations on truck drivers.

Three concerns, and to some slight extent a fourth, had arrangements for nurse visits to the homes of ill employees. In 1 case the nurse would visit sick employees to deliver their pay envelopes. The wisdom of continuing this practice was under consideration. The 2 concerns that most rigorously followed the practice of home visits felt that they were useful in keeping the company informed on the nature of the employee's illness, in making sure that he was receiving proper attention, and in gaining some idea as to how long the employee would be away from work. It was thought that these visits were also useful in keeping unnecessary absences to a minimum.

At 5 of the concerns the in-plant unit either was responsible for keeping all of the records of employees' sick leave and disability or performed a significant role in the processing of these records. Frequently these units employed 1 or 2 clerks solely for this purpose.

Periodic physical examination for all or some groups of employees are performed by 8 of the 12 in-plant health services. There is great variation in the nature, scope and purpose of these examinations. One small establishment has instituted the practice of periodic physical examinations for all employees; the medical director does these as time permits, but the aim is to examine all employees every 18 months. The examinations are voluntary, and the great majority of the employees take them. Another small concern also performs periodic examinations; these are available to all employees, but the emphasis is on the senior and higher paid employees. At the present scheduling employees will be examined about once every 2 years; these examinations also are on a voluntary basis. Another organization, a hospital, performs a chest X-ray examination and certain laboratory tests on all resident physicians, interns, nurses and orderlies every 6 months and annually on all other employees. Those exposed to radiation are examined every 4 months. All these examinations are compulsory.

Another organization has its physician make a periodic physical examination on all employees about once every 2 years; the examination is obligatory. Still another organization, many of whose employees are vehicle operators, requires that all drivers or operators must be examined periodically. It aims to do such examinations about once every 2 years, but in no case not less often than every 3 years. (Interstate Commerce Commission regulations require such examinations every 3 years.) There are no periodic examinations for other employees. Another organization provides for obligatory periodic physical examinations of its car and truck drivers, at least every 3 years. One very large organization will provide a physical examination to any employee who requests it, but it makes no effort to induce employees in general to have such examinations. Top executives and supervisory personnel, however, are encouraged to have an examination at intervals of 1 to 3 years depending on age—every year for those over 40—and are reminded when it is time for their examination. In addition, there are obligatory periodic examinations for a small number of employees exposed to certain industrial health hazards. Finally, 1 medical unit provides periodic examinations for those members of the executive staff who desire them.

The thoroughness and scope of the physical examinations vary markedly. At 1 establishment the physician spends as much as an hour and a half on the initial periodic physical examination, perhaps half an hour on subsequent examinations, and arranges for any indicated X-ray examinations and laboratory tests. At some other establishments the examinations are relatively brief and limited.

The motivations behind these examinations obviously vary, ranging from an interest in conserving and maintaining the health of employees to protecting the public from unsafe drivers and to concern for liability suits arising out of possible accidents.

## Number of Visits to In-plant Services

One index of the utilization of an in-plant health service is the number of visits per employee per year, i.e., total visits during the year divided by the average number of employees. Data on visits are set forth in table 2. It will be seen that the average number of visits per employee per year ranged from 1.2 to 13.0, and that in general the number of visits is greater at the smaller concerns. No data were available on the proportion of employees who made some use of the in-plant health service during a year. Undoubtedly at some concerns this would be close to 100 per cent, at other concerns a rather small figure.

The number of employee visits is affected by several factors. Perhaps most important is the motivation of the unit, whether it believes its function is solely or mainly to take care of work injuries and to do preëmployment examinations, or whether it takes a broader view and endeavors positively to conserve and promote the health of employees through such services as care of minor illness, health counseling, and periodic examinations. An important factor is the proximity of the health unit to the employees, i.e., whether the employees are all concentrated at a central location so that it is possible for them to come to the health unit without appreciable loss of time, or whether they are widely dispersed, so that it is impracticable for them to come to the health unit for minor matters. As indicated previously, where only a small proportion of the employees are located at the headquarters building containing the health unit, the majority of employees being widely dispersed or out in the field all day, the average visitation rate will reflect a high rate for employees at the headquarters' location and a negligible one for the other employees. The rate of visits also depends upon the personalities of the doctor and nurse and the extent to which they have won the confidence of the employees.

TABLE 2

*Number of Visits to In-plant Health Services per Employee per Year at 12 In-plant Health Services*

| Size Group (No. of Employees) | Range in No. of Visits | | Average for Group |
|---|---|---|---|
| | High | Low | |
| Under 1,000—4 concerns | 13.0 | 8.1 | 10.2 |
| 1,000—2,500—4 concerns | 5.6 | 2.0 | 4.0 |
| Over 2,500—4 concerns | 9.3 | 1.2 | 2.9 |
| Total | 13.0 | 1.2 | 3.8 |

## COSTS OF MAINTAINING THE IN-PLANT HEALTH SERVICE

Table 3 presents data for the 12 concerns on the annual cost of maintaining the in-plant health service. Most of the concerns visited did not routinely compile information on the annual expense of maintaining the health unit. In fact, of the 12 concerns, only 1 had adopted the practice of computing the cost per employee to make comparisons with past years and other organizations.

Table 3 is based on such data as could conveniently be provided by the medical director, nurse or personnel official. For some concerns, certain items entering into the cost are estimates, precise data not being available. A concern will readily know the salaries of the medical, nursing and other personnel engaged in the in-plant health service. Some keep separate account of, and can readily ascertain the annual expenditures (generally quite small) for medicines and medical supplies. Few concerns take the trouble, or have the cost accounting procedures, to calculate the overhead charges of the health service, that is, the amounts chargeable to the health service for space used, telephone, light, water, and general housekeeping services, general supplies (stationery, etc.) used, and the health service's appropriate share of the overhead of the concern as a whole. These items might well amount to between 10 and 25 per cent of the total costs of the in-plant service.

It will be seen from the table that the annual costs are remarkably variable, ranging from $5.14 to $46.80 per employee. However, only 2 of the concerns had per employee costs of more than $21 and only 3 of less than $9.15. Thus, $10 to $20 appears to be the range in which most in-plant health service costs fall.

The table deserves close study, since it brings out the diversity of arrangements in company health services. To some extent the costs of maintaining in-plant health services are not strictly comparable among the concerns, since the services performed and the items of service included are by no means the same. For example, one in-plant health service may provide little more than first aid for work injuries, all subsequent care being performed by outside physicians paid on a fee basis by the compensation carrier, the costs not being charged to the in-plant health service. However, at another concern, which is self-insured as regards workmen's compensation, the company in-plant service will provide whatever service it can in ambulatory cases, paying outside physicians only for services to hospitalized patients or for required specialist care which the in-plant physician does not consider himself qualified to give. (We have not considered payments to hospitals or outside physicians for services to injured workers as part of the costs of the in-plant service.) In still another situation the company medical director may be a surgeon, and his retainer will include services to injured workers at the plant or in the hospital. It would not be practicable to break down his salary for services at the plant and for services in the hospital. The whole thus enters into the cost of the in-plant health service, whereas at other concerns any services in the hospital would not figure in the costs of the in-plant service.

Another example of a practice which prevents strict comparability of costs is that some in-plant health services keep the employee records on disability, absenteeism, and possibly sick benefits due, whereas in other concerns this procedure is not followed.

Although the above factors are of some importance, the major cause of the variation in per employee costs for these in-plant health services lies in the motivation and nature of the service. If a concern thinks of its in-plant service as designed only for care of work injuries and performance of preëmployment examinations, its per capita costs, unless it has a very high work accident rate, will be low. On the other hand, when the service is designed to keep employees well and provides preventive services, care of minor illness and health counseling, then a relatively high number of physician and/or nurse hours per employee will be required and the costs will be comparatively high. As soon as a concern initiates periodic annual or biannual physical exami-

TABLE 3

*Annual Costs Incurred by 12 Concerns in Maintaining Their In-plant Health Services*

| Concern | Number of Employees | Total Salaries of Medical and Nursing Personnel | | Total Salaries of All Personnel in Health Unit | | Total Cost of Maintaining Health Unit* | |
|---|---|---|---|---|---|---|---|
| | | Amount | Per Employee | Amount | Per Employee | Amount | Per Employee |
| A | 240 | $7,384 | $30.77 | $7,384 | $30.77 | $9,776 | $40.73 |
| B | 340 | 10,469 | 30.79 | 10,469 | 30.79 | 15,913 | 46.80‡‡ |
| C | 800 | 5,700† | 7.13† | 5,700† | 7.13† | 6,000† | 7.50† |
| D | 900 | 8,500‡ | 9.44‡ | 10,000‡ | 11.11‡ | 11,700‡ | 13.00‡ |
| E | 1,300 | 8,848 | 6,81 | 16,078# | 12.37# | 27,847†† | 21.42†† |
| F | 1,850 | 17,448 | 9.43 | 17,448 | 9.43 | 18,491 | 10.00 |
| G | 2,200 | 10,800§ | 4.91§ | 10,800§ | 4.91§ | 11,300§ | 5.14§ |
| H | 2,300 | 10,200‖ | 4.43‖ | 11,700‖ | 5.09‖ | 14,700 | 6.39 |
| I (Main unit) | 2,600 | 21,172 | 8.14 | 22,601** | 8.69** | 23,790** | 9.15** |
| I (Whole company) | 5,000 | NA¶ | NA¶ | NA¶ | NA¶ | 38,574** | 7.71** |
| J | 2,630 | 15,578 | 5.92 | 22,728 | 8.64 | 31,988 | 12.16 |
| K | 3,000 | 39,700 | 13.23 | 45,700 | 15.23 | 52,000 | 17.33 |
| L | 9,000 | 97,000 | 10.78 | 116,000 | 12.89 | 134,758 | 14.97§§ |

* Unless otherwise indicated, total cost includes no charge to in-plant health service for rent and general overhead, i.e., expense for space used, light, heat, telephone, housekeeping services, etc. and share of general overhead of concern.

† Does not include allowance for cost or value of medical, X-ray and laboratory services maintained for purposes other than the in-plant health service, but made available to this service.

‡ Includes no allowance for services of physicians and laboratory technicians employed for other purposes but made available on occasion to in-plant health service.

§ All physician services rendered in the plant to injured workers are paid for by workmen's compensation fees and are not included.

‖ Does not include fees paid to plant physicians for preëmployment examinations.

¶ Not available.

# Does not include salaries of dentist and dental hygienist, the cost of whose services are partially compensated by dental fees paid by employees.

** Includes salary of part-time dentist, not compensated by fees paid by employees for dental work. This activity has been discontinued.

†† Includes net cost of concern of maintaining dental service, i.e., costs not covered by fees paid by employees for dental services.

‡‡ Includes charge for rent and overhead amounting to $8.47 per employee.

§§ Includes charge for rent and house services amounting to $0.57 per employee. This is probably an underestimate.

nations on all employees, its costs mount, for such examinations are relatively expensive in terms of physician- and nurse-hours of time required. (Both of the programs with the highest costs perform periodic examinations on all employees every 18 months or 2 years.)

The cost of an in-plant health service to a small concern, say, of 250 or 300 employees, assuming it has a full-time nurse, is bound to be over $20. Most concerns in Washington are currently paying about $4,000 to $5,000 for a full-time industrial nurse. With a part-time physician giving, say, 5 hours a week to the service, the expense for salaries alone will be around $5,500 to $7,000; another $500 or so will be required for medical supplies. Hence, for 250 employees, the cost of such a service will be at least $25 to $30 per employee per year, not including overhead.*

## RELATIONSHIPS TO HOSPITAL AND MEDICAL INSURANCE PROGRAMS

All of the concerns make available to their employees hospitalization, surgical and, in some cases, medical benefits either through the local Blue Cross-Blue Shield Plans or a group policy with an insurance company. At 4 concerns the employee pays the whole cost. At all the other concerns the cost is shared—most frequently on an equal basis—between the concern and the employee. In general, the in-plant health services have no relationship to these programs; the medical director of the concern was not consulted in the design or the development of the program and does not participate in its administration.

## VALUE OF IN-PLANT HEALTH SERVICE

The physicians, nurses and personnel directors interviewed stated that in their opinion the in-plant health service was valuable and well worth its cost to the company. None, however, could express in dollars and cents the contribution made toward increased productivity or reduced expenses from illness or accidents.

It appears that the value of an in-plant health service comes in the form of various intangibles which cannot be measured. In part, the in-plant health service is a contribution to employee morale, a service which makes employees feel that they are valued and that the company is a good one to work for. In a large organization, with over a thousand employees concentrated at one location, an employee health unit is virtually a necessity. In other words, among so many people, whatever the nature of the activity, accidents or illnesses at work occur sufficiently often that a trained person should be on hand to give care or advice. Most concerns of any size believe that preëmployment examinations are desirable; that is, before taking on a prospective employee they wish assurance that he is physically fit for the work in mind. For some companies preëmployment examinations and return-to-work examinations for employees in certain occupations are a necessity either for their own or the public's protection. For example, a transit company must make sure that its drivers are physically fit and have good vision and hearing.

Health counseling (to some extent it is counseling on matters other than health) is considered a valuable function of these in-plant health services. It assists the employee in resolving various problems that are worrying him and the resolution of which will increase his effectiveness and efficiency. This aspect of an in-plant health service ties it in closely with personnel administration.

For most of the concerns visited the cost of work injuries is relatively low. The plant health unit may have made some contribution to reduction of these costs. At any rate, the workmen's compensation premiums or the direct costs for medical care and cash benefits in work injury cases are now relatively small in relation to the company's contribution toward its group life, disability and medical care insurance program. Whether in-plant health service programs can play an important role in reducing the costs of these programs remains to be seen; some plant medical directors think they can.

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* In addition to these 12 concerns, approximate cost data were obtained over the telephone for various other in-plant health services in the Washington area. These data may be of interest and are as follows:

Concern with 850 employees: 1 part-time physician, 1 full-time nurse and 1 nurse who works in personnel department and gives only 20 per cent of time to in-plant health service; $10.80 per employee.

Concern with 650 employees: 1 nurse who serves 75 per cent of time as receptionist and 25 per cent of time as nurse; cost about $1.40 per employee.

Concern with 800 employees at main location: 1 full-time nurse, fees paid to physicians for preëmployment examinations; cost about $7 per employee.

Concern with 600 employees: 1 full-time nurse; cost about $8.30 per employee.

Management's estimation of the value of an in-plant health service appears to depend upon its philosophy, its view of the importance of the health of its employees. When management feels that its workers are an important resource and that their health is an important consideration, activities designed to conserve and promote the health of employees are regarded as valuable.

### SUMMARY

Twelve representative industrial health service programs in the Washington Metropolitan Area have been described. Undoubtedly, these programs are fairly typical of those of industrial and commercial concerns elsewhere. All except 1 of these programs utilize the services of a part-time physician, the number of nurses varying with the employee population served.

The number of annual physician- and nurse-hours of time per employee under these programs range from a low of 0.9 to a high of 9.0. The utilization of the in-plant health service ranges from a low of 1.2 to a high of 13.0 visits per year per employee. The annual cost of maintaining the programs was found to range from $5.14 to $46.80 per employee per year.

It will thus be seen that one of the striking facts about the in-plant health services studied is their variation. The programs range from ones which provide little more than first aid and care for work injuries to those which through preventive services, control of health hazards, care of minor illnesses, health counseling, and periodic examinations take positive steps to promote and conserve the health of the employees served.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**One Surgeon's Practice.** FREDERICK CHRISTOPHER, M.D., Emeritus Professor of Surgery, Northwestern University Medical School. Price, $4.00. Pp. 151. Philadelphia: Saunders, 1957.

**Modern Perinatal Care.** LESLIE V. DILL, M.D., F.A.C.S., Diplomate of the American Board of Obstetrics and Gynecology; Associate Clinical Professor, Obstetrics and Gynecology, Georgetown University School of Medicine; Consultant, Obstetrics and Gynecology, Army Medical School and Walter Reed General Hospital; Staff Member, Obstetrics and Gynecology, Providence Hospital, Washington, D. C. Price, $6.50. Pp. 309. New York: Appleton, 1957.

**Clinical Toxicology of Commercial Products—Acute Poisoning (Home and Farm).** MARION N. GLEASON, Research Assistant in Pharmacology, School of Medicine and Dentistry, The University of Rochester, Rochester, New York; ROBERT E. GOSSELIN, M.D., PH.D., Professor of Pharmacology, Dartmouth Medical School, Hanover, New Hampshire; AND HAROLD C. HODGE, PH.D., D.Sc., Professor of Pharmacology and Toxicology, School of Medicine and Dentistry, The University of Rochester, Rochester, New York. Price, $16.00. Pp. 1160. Baltimore: Williams & Wilkins, 1957.

**Clinical Cardiopulmonary Physiology.** Sponsored by the American College of Chest Physicians. EDITORIAL BOARD: Burgess L. Gordon, M.D., *Chairman and Editor-in-Chief*; Albert H. Andrews, Jr., M.D., Alvan L. Barach, M.D., John F. Briggs, M.D., Edwin R. Levine, M.D., George R. Meneely, M.D., Hurley L. Motley, M.D., Maurice S. Segal, M.D., Harold G. Trimble, M.D. Price, $15.75. Pp. 759. New York: Grune, 1957.

**Ph.D. The Philosophy of a Doctor. Experience and Aspiration.** JANVIER W. LINDSAY, M.D. Price, $2.50. Pp. 83. New York: Pageant Press, 1957.

**Current Surgical Management. A Book of Alternative Viewpoints on Controversial Surgical Problems.** Editors: JOHN H. MULHOLLAND, M.D., Editor-in-Chief, New York University College of Medicine; EDWIN H. ELLISON, M.D., Ohio State University College of Medicine; AND STANLEY R. FRIESEN, M.D., University of Kansas Medical Center. With contributions by 76 American Authorities. Price, $10.00. Pp. 494, illustrated. Philadelphia: Saunders, 1957.

**Clinical Gastroenterology.** EDDY D. PALMER, M.D., F.A.C.P., Lieutenant Colonel, Medical Corps, United States Army; Consultant in Gastroenterology to The Surgeon General; Formerly Chief of Gastroenterology Service, Walter Reed Army Hospital. Illustrations

(*Continued on page 572*)

# On the Lighter Side

Autumn is beautiful in all of its naturalness: the turning of the leaves from living green to multihue; the browning of the sod; the clear crispness of the air when the autumn sun withdraws its warmth; the lazy haze that hangs in droopy wisps in the hollows of the land when the coolness of the early morning is abroad; the impenetrable blackness of the autumn sky at night against the myriad flickering sparkles of starlight; the dull whiteness of the frost in the chill of the predawn, and then the sudden thawing to glittering droplets on every leaf and blade of grass when the penetrating rays of the morning sun reach down to warm the crust of the earth. This is Autumn.

Autumn is a wonderful time for fishing. The warmth of the past summer's heat has not as yet left the waters of the bays and rivers. The fish are jumping and churning the rivulets into bubbly foam when hungry finny hordes school on the surface. Ask any confirmed or converted fisherman and he will tell you that good fishing knows no season. Of course, one must dress to suit the season, and often a stubby, well-lit pipe will keep the nip from one's nose; but as long as the sun's rays are on one's back the weather is always comfortable to the real fisherman.

Will Wonders Never Cease! It is said, on good authority, that all boatmen may claim a refund of 6 cents on every gallon of gasoline purchased for boating purposes. The District of Columbia, Maryland, and Virginia will refund the entire amount on proper application. In addition, a new refund went into effect this year for the first time. The Federal Government will refund 1 cent of its 3 cents excise tax to boatowners who submit application form 843.

These necessary tax forms can be obtained from Maryland, Virginia and the District of Columbia by mailing your request for the proper form on a postal card. The forms to request are as follows: form P-3900 from the D. C. Collector of Taxes, Washington, D. C.; form GT-100 from the Gasoline Tax Division, Annapolis, Maryland; form VGT-Rev 50M from the Department of Motor Vehicles, P. O. Box 1298, Richmond 10, Virginia. Indeed, you are welcome.

CHUCKLES CHEWED from the CHOMPETITION: A Lover Boy weekending at a nearby seaside resort asked a pretty girl for a dance. As they sashayed around the floor, he squeezed her fondly, cooing into her ear, "You're beautiful, my darling!" On the second squeeze he said, "You have a gorgeous shape!" On the third squeeze he breathed heavily and whispered, "Come on Baby, this is my last night! I have to go back in the morning." To which she baby-stared, "Gosh, I'm dancing as fast as I can." . . . Which reminds us of the thought that when a Lover Boy starts to take off his glasses he is getting ready to go to bat; but when she starts removing her earrings he is already on second base! . . . A middle-aged wolf took a seat next to a pretty girl and asked, "Where have you been all my life?" Giving him a cold stare, she replied, "Well, for most of it I wasn't even born." . . . We know a fellow who just discovered there's no such thing as a little lipstick—especially if it is on your collar. . . . One Chorine to another: "Gee, I sure could use a new mink." Second Chorine: "Me too, but who can we use for money?" . . . The difference between kissing your sister and somebody else's sister is about 45 seconds. . . . A man's mother-in-law is a relative always on his wife's side. . . . "Where did you find that gorgeous blonde I saw you with last night?" "I just opened my wallet and there she was." . . . Incompatibility need not lead to divorce—especially if he has the income and she is pattable. . . . "My husband," said the distraught woman," is the musical type—fit as a fiddle and tight as a drum." . . . Eve: the first chicken to ruin a man's garden.

SUCCESS NOTE: Good guy Donald R. Sickler, Director of the Bureau of Tuberculosis of the District Health Department, was promoted recently in the District National Guard to full Colonel.

Colonel Sickler was discharged from the Medical Corps as Major in 1946 and joined the National Guard in 1954. He is chief of medical service and Deputy Commander of the Guard's 115th Evacuation Hospital. Congratulations, Donald Sickler!

J. EARL KADAN, M.D.

# WOMAN'S AUXILIARY NOTES

"Health is a joint endeavor" will be the 1957–58 motto for the Woman's Auxiliary to the Medical Society of the District of Columbia. Mrs. James E. Wissler, who succeeded Mrs. Albert E. Marland as President of the organization, has been busy all summer making plans with various committees for action this fall when the club calendar officially opens.

"Lola," as Mrs. Wissler is known to her countless friends, is a petite, energetic, keen-witted brunette with a talent for club work. She is an active member of The Washington Club, Wesley Heights Florence Crittenden Circle, and Metropolitan Memorial Methodist Church. She is President of the Wesley Heights-Spring Valley Arts Club (1957); past Vice President of the Kappa Delta Alumnae Association of Washington, D. C.; and Past President of the Burleith Book Club. She is an inactive member of the Jack Jouett Chapter, D.A.R., Charlottesville, Virginia. She served for six years as Treasurer of the Surgeon's Auxiliary of the Southern Railway Company.

MRS. JAMES E. WISSLER
*President, Woman's Auxiliary to the Medical Society*

Mrs. Wissler has been interested in the activities of the W.A.M.S. for many years and has served as chairman of several committees in addition to her elected offices as Treasurer and President-elect. Lola is probably best remembered for the efficient way she managed the W.A.M.S. Bowling League in 1955–56.

Although Mrs. Wissler claims Charlottesville, Virginia, as "home," she was actually born in Carter County, Tennessee, the daughter of Dr. and Mrs. James G. Johnson. Her father is deceased. She is a graduate of the University of Virginia, where she met her "Jimmie." As Lola says, she was happy to exchange her B.S. for an MRS.

The Wisslers moved to Washington, D.C., in 1935. Dr. Wissler, a roentgenologist, is associated with the firm of Groover, Christie & Merritt. They have a daughter, Anne, who attended Randolph Macon Women's College in Lynchburg, Virginia, and was graduated from the Katharine Gibbs Secretarial School, New York, this past June.

Officers and chairmen who will serve with Mrs. Wissler for 1957–58 are:

### *Officers*

President-elect: Mrs. M. Noel Stow
First Vice President: Mrs. William J. G. Davis
Second Vice President: Mrs. George J. Stuart
Recording Secretary: Mrs. Francis J. Murray
Assistant Recording Secretary: Mrs. Hugh W. Irey
Corresponding Secretary: Mrs. James P. Murphy
Assistant Corresponding Secretary: Mrs. George W. Ware
Treasurer: Mrs. Hugh O. House
Assistant Treasurer: Mrs. V. John Murgolo

### *Chairmen of Committees*

American Medical Educational Fund: Mrs. Julius J. Radice
Bowling: Mrs. Alec A. Preece
Bulletin and *Today's Health*: Mrs. Charles E. Bickham
Delegate to Woman's Auxiliary to AMA: Mrs. Albert E. Marland
Editor of *Newsletter*: Mrs. Joseph M. Rom
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Philanthropic: Mrs. George J. Stuart
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Visiting: Mrs. William J. G. Davis
Ways and Means: Mrs. Harold R. Downey

MRS. J. BLAINE HARRELL
*Publicity Chairman*

# News and Personals

## MEETINGS

**The Upjohn Company** will sponsor **Grand Rounds Number 6,** another closed circuit telecast, in the Medical Society's auditorium on Wednesday evening, November 13, from 9 to 10:30 p.m., Eastern Standard Time. The subject for presentation is entitled, "Three Key Questions in Coronary Disease: (1) What is the place and value of surgery? (2) What is the role of dietary fats? (3) Is long-term anticoagulation worthwhile?"

An outstanding group of physicians will participate in this discussion. They are: Drs. Ancel Keys and Clarence W. Lillehei, University of Minnesota; Dr. Edward H. Ahrens, Jr., Rockefeller Institute for Medical Research; Dr. Charles P. Bailey, Hahnemann Medical College; Dr. Claude S. Beck, Western Reserve University School of Medicine; Dr. William Dock, State University of New York School of Medicine; Dr. Donald Brian Effler, Frank E. Bunts Institute; Dr. J. N. Norris, Social Medical Research Unit, London, England; and Dr. Paul Dudley White, Harvard Medical School.

Grand Rounds Number 6 has been approved for credit by the American Academy of General Practice. Such credit may be applied to the Academy's required 150 hours of postgraduate study.

It is anticipated that this program will be as popular as the previous Grand Rounds sponsored by the Upjohn Company and that the auditorium will be filled to capacity.

**The 110th Meeting of The Medical Society of Virginia** will be held at the Hotel Shoreham in Washington, October 27-30, 1957. An extensive program has been planned, with scientific meetings to begin at 9 a.m. on Monday, October 28.

Several members of the District Medical Society and other physicians of the Washington area will take part in the meeting. Dr. Charles S. White will present a paper in the Terrace Banquet Room at 10:05 a.m., October 28, on "The Treatment of Metastatic Carcinoma." At the General Session in the West Ballroom, the same day, Colonel Thomas W. Mattingly, Chief of the Cardiovascular Service of Walter Reed Army Hospital, will speak on "Cardiovascular Manifestation of Tumors of the Adrenal Gland," which will be followed by an address by Dr. Owen Gwathmey, of the Department of Surgery, George Washington University, on "Blebs and Bullae."

The Monday evening meeting will be called to order by Dr. J. R. B. Hutchinson, of Arlington, Chairman of the Committee on Arrangements, an Associate member of the District Medical Society. This meeting, to be held in the West Ballroom, will feature two addresses, one by the President of the Virginia Society, Dr. James D. Hagood, Clover, Va., and another by Mr. Joseph C. Robert, President of Hampden-Sydney College.

Two panels of current interest are scheduled. On October 29, at 2:30 p.m., there will be a panel discussion on Prevention of Automobile Injuries and Deaths. Among the speakers will be the Honorable Kenneth A. Roberts, Chairman of the Special Committee on Traffic Safety, House of Representatives, Washington, D.C., and Mr. John J. Agnew, Deputy Chief-in-charge of Traffic of the Metropolitan Police Department, Washington, D.C. The motion picture, "On Impact," produced by the Ford Motor Company and sponsored by the American Medical Association, will be shown in connection with this discussion.

The other panel discussion will be held at 9 a.m., on October 30, on Religion and Medicine. Guest speakers will be the Reverend Thomas J. O'Donnell, S.J., Regent and Dean of Students, Georgetown University School of Medicine; the Reverend Albert T. Mollegen, Professor of New Testament Language and Literature of the Virginia Theological

Seminary, Alexandria; and Rabbi Emmett A. Frank, of the Beth El Hebrew Congregation of Northern Virginia, Alexandria. Following this panel, Dr. Leo H. Bartemeier, Chairman of the Council on Mental Health of the AMA, will discuss "Specific Suggestions for the Care of Patients Suffering from Emotional Disorders."

Dr. Harry C. Bates, Jr., of Arlington, an Associate member of the Medical Society of D. C., will be installed as President of the Medical Society of Virginia at the annual banquet, October 29.

Dr. Richard E. Palmer, of Alexandria, also an Associate member of the District Medical Society, will be moderator for a Clinical Pathological Conference at 11:00 a.m., October 30, the closing scientific event.

**The 64th Annual Convention of the Association of Military Surgeons of the United States** will convene at the Hotel Statler, October 28–30, 1957. The theme of the meeting will be "Professional Excellence—The Criterion of Military Medicine."

Colonel Amos R. Koontz, M.C., of the Maryland National Guard, will use the convention theme as the title of his Presidential Address, to be given at the opening session, October 28. At this session there will be a panel discussion on the subject, "Medical Education in the Federal Services"; participating will be the Surgeons General of the Army, Navy, Air Force and Public Health Service, and the Medical Director of the Veterans Administration. The moderator will be Dr. Frank B. Berry, Assistant Secretary of Defense (Health and Medical).

Participating in a panel on "Surgery of the Large Intestine" on October 29, 2:30 p.m., will be Dr. Calvin M. Smyth, Philadelphia; Dr. Henry W. Cave, New York City; Dr. Claude Dixon, Rochester, Minn.; and Dr. Harvey B. Stone, Baltimore, Md.

On October 30, at the morning session, there will be a joint medical and surgical panel on "Management of Patients with Coronary Artery Disease." The medical aspects will be presented by Dr. William D. Stroud, Philadelphia; Dr. George E. Burch, New Orleans; and Colonel Thomas W. Mattingly, Washington, D. C. Present to discuss the surgical aspects will be Dr. Alfred Blalock, Baltimore; Dr. Claude S. Beck, Cleveland; and Brig. General James Forsee, Washington, D. C.

The various Federal services, including VA, the Armed Forces Institute of Pathology, and the Public Health Service, HEW, will be represented in the scientific exhibits. Captain G. N. Raines, an Active member of the D. C. Medical Society, is listed among the exhibitors for the Navy's exhibit on "Psychiatry in the U. S. Navy's Operation Deep Freeze." Dr. A. B. C. Knudson, Associate member of the Medical Society, will participate as co-exhibitor in the VA exhibit on "Audiology in the Veterans Administration," and Dr. W. C. Manion, also an Associate member of the Medical Society, is credited, with others, for the exhibit, "Nonpenetrating Injuries of the Heart and Aorta," sponsored by the Walter Reed Army Medical Center and the Armed Forces Institute of Pathology.

**The Congress of Neurological Surgeons** will hold its annual meeting in Washington, November 7–9, at the Hotel Statler. Registration will begin at 9 a.m. on November 7. Some of the papers to be presented during the three-day meeting will be:

"Notes on a Series of Cerebellar Tumors in Children," Dr. Francis C. Grant, Philadelphia

"Subdural Collection of Fluid in Infants and Children; the Chronic Membrane," Dr. R. M. N. Crosby, Baltimore, Md.

"Problems of Spinal Fluid Dynamics in Hydrocephalus," Dr. Edgar Bering, Boston

"Experimental and Clinical Observations on the Shunting of Spinal Fluid into the Circulatory System," Dr. Robert Pudenz, Pasadena, Calif.

"Unilateral Exophthalmos in Childhood," Dr. Donald Matson, Boston

"Neurosurgery for Involuntary Movement Disorders in Children," Dr. Irving S. Cooper, New York

"The Anesthetic Management of Children for Neurosurgical Procedures," Dr. Harvey Slocum, Washington, D. C.

"Several Intracranial Tumors Occurring in Children; Ocular Signs," Dr. Frank Walsh, Baltimore, Md.

"The Limp Child," Dr. Douglas Buchanan, Chicago

"The Problem of Subfrontal Meningiomas," Dr. Francis C. Grant, Philadelphia

On Friday afternoon, November 8, a number of short scientific papers will be given on various research problems in which members have been interested. On Saturday morning, Dr. Grant will present a paper on "Experiences with Chordotomy." Following his paper there will be a panel discussion, moderated by Dr. William J. German, New Haven, Conn. The panelists will be the various guest speakers, who will answer questions brought up by the previous days' scientific presentations.

There will be four **Medical Meetings** sponsored by the **Surgeon General of the Army** during 1957–58. They will be held on the third Thursday of November, January, March and May.

The first meeting in the series is scheduled for November 21 in the Sternberg Auditorium at Walter Reed Army Medical Center. Dr. Walter L. Bierring, of Des Moines, Iowa, will deliver the principal address, entitled "Medical Echoes." Dr. Bierring has held many offices in medicine, including the presidency of both the American Medical Association and the Iowa State Medical Society; he received the AMA's Distinguished Service Medal in 1956. His numerous and distinguished accomplishments are fully described in the August issue of *The Journal of the Iowa State Medical Society*, designated a *Festschrift Issue* in his honor.

**The Joint Urological Conferences** will be held this year on the last Tuesday of each month, from September to May, at the Georgetown University School of Medicine, Room 101, beginning at 8 p.m. These conferences, under the chairmanship of Dr. William P. Herbst, are sponsored jointly by the following hospitals and medical institutions: D. C. General Hospital, Georgetown University Hospital, George Washington University Hospital, Howard University, Army Medical Center, Naval Medical Center, and Mt. Alto Urological Services.

**The District of Columbia Division of the American Cancer Society** will hold its Annual Meeting, October 21, at 8:00 p.m. at the D. C. Chapter of the American Red Cross, 2025 E Street, N.W. The meeting is open to all, with a special invitation extended to physicians and other professional personnel.

**The Medical Grand Rounds of Georgetown University Medical Center** were resumed on September 3 and are being held each Tuesday at 4:30 p.m. in the amphitheatre of the Georgetown University School of Medicine (Room 102). The conferences are open to all physicians and medical students.

**The Washington Psychiatric Society** will meet in the Medical Society's auditorium at 8:30 p.m., October 25. Drs. Robert A. Cohen, George N. Raines and Edith H. Weigert will report to the membership on their impresssions of the second International Congress of Psychiatry, which was held in Zurich, Switzerland, September 1–7, and other psychiatric activities observed during their European visit.

On November 22, the Society will hold a joint meeting with the Washington Psychoanalytic Society. The speaker and topic will be announced.

Members of the District Medical Society are requested to reserve Saturday night, December 21, for the **Doctors' Symphony Orchestra Concert,** which will be held at Constitution Hall. The concert will feature Bach's "Christmas Oratorio," a joint production of the Caduceus Choral Society, under the tutelage of Dr. Earle B. Thompson, and the Doctors' Symphony Orchestra, directed by Mr. Richard Dirksen, Associate Organist of the Washington Cathedral.

This musical program is sponsored by the Medical Society of the District of Columbia, the District of Columbia Dental Society, and the Graduate Nurses' Association of the District of Columbia. The proceeds of the concert will provide scholarships for student nurses, a project of the Woman's Auxiliary to the Medical Society.

## GENERAL NEWS

The new **Washington Hospital Center** opened its **School of Nursing,** September 9, with an enrollment of 150 students. The school has a 288-student capacity, with most of the upper class students coming from the old Garfield School of Nursing.

The Center has already been used for graduating exercises by the 1957 Class of Garfield Hospital School of Nursing. The 28 graduates received their diplomas, September 6, from Mrs. Katherine Knauff, Director of the Center's School of Nursing and Nursing Service. They were addressed by Dr. W. Dandridge Terrell, Jr., Chief of the Center's Department of Obstetrics and Gynecology.

The District Commissioners have given the Fire Department responsibility to operate a new **centralized emergency ambulance service.** The service will include 8 ambulance units furnished by the Fire Department, the D. C. Department of Public Health, and Emergency and Casualty Hospitals. Three emergency ambulances, formerly stationed at D. C. General Hospital, have been assigned to the following locations: Connecticut Avenue and Fessenden Street, N.W.; New Jersey Avenue and M Street, N.W.; and Central Avenue and 49th Street, N.E. (on a part-time basis). When Emergency Hospital moves into the new Washington Hospital Center, the ambulance it now operates will be transferred to Engine Company 23 at 21st and G Streets, N.W.

The new service will include one ambulance each for Emergency Hospital (to operate from the new Hospital Center) and Casualty Hospital, at 708 Massachusetts Avenue, N.E.

The city's two Fire Department rescue squad ambulances will continue to operate from their present stations at 12th and H Streets, N.W., and North Capitol and Crittenden Streets. A new Fire Department Rescue Squad No. 3, with its own ambulance, will operate from 24th and Irving Streets, N.E.

The Commissioners plan to make all emergency ambulance drivers uniformed firemen within the next year or two. The Fire Department already dispatches emergency vehicles but nominal control of their operation has been in the hands of the Emergency Ambulance Service, headed by Dr. John A. Reed, Chairman of the Board of Police and Fire Surgeons. This organization will continue in an advisory capacity to the Commissioners.

**Children's Hospital** has received a grant of $25,000 to use in establishing a clinic to study cystic fibrosis. The check was presented by Mr. James E. Weber, President of the District Area Chapter of the National Cystic Fibrosis Research Foundation, to Dr. Robert Parrott, the Hospital's Physician-in-chief. Mr. Weber made the presentation on behalf of the William Green Memorial Fund Committee of the American Federation of Labor-Congress of Industrial Organizations.

The clinic will be known as the William Green Children's Clinic, in honor of the late President of the AFL. It will set up diagnostic and laboratory guides for treatment and drugs, to be provided at small or no cost to the patient. The Hospital's research team will use the clinical and laboratory data provided by the clinic for intensive study of this rare disease. The patient's own physician is expected to become a part of the clinic team, with the Hospital providing oxygen equipment and the assistance of specialists.

**The American Heart Association** has awarded more than $50,000 in research grants to six Washington doctors on the staffs of Georgetown University and Howard University Schools of Medicine. For the first time in the history of the Association, the national organization has awarded more money to local research scientists than the Washington Heart Association contributed to the National Fund. Members of the District Medical Society will use their grants for the following research projects:

Dr. John C. Rose, Georgetown, $5,500 for studies in the circulation of the blood and the many different factors that control it.

Dr. Frank A. Finnerty, Jr., Georgetown, $5,390 for studies of the cardiovascular aspects of delirium tremens.

Earlier this summer $18,500 was awarded by the AHA to the following physicians: Dr. Finnerty, for diagnostic studies in high blood pressure appearing in women with newborn infants; to Dr. Rose, for studies in the circulation of the blood and the factors which control it; and to Dr. Lawrence S. Lilienfield, also of Georgetown University, for study of the mechanisms controlling blood flow through the kidney and the effects of changes in blood pressure and heart output on these mechanisms, using radioactive tracers.

**The National Foundation for Infantile Paralysis** has approved awards, for Nation-wide distribution, totaling more than $4,500,000, in support of research projects for the treatment of poliomyelitis and other virus diseases, regional respiratory and rehabilitation centers, and for a professional education program designed to attract workers to the health fields. **Georgetown University School of Medicine** is one of 8 institutions which will use their grants for research on the prevention and treatment of the after-effects of poliomyelitis. The allocation to

Georgetown is $1,460, to study what happens to the structure of bones under pressure.

**Children's Hospital** will undertake an $800,000 expansion and remodeling program late this fall, to include a $500,000 research center to concentrate and expand research activities scattered throughout the Hospital.

The Variety Club of Washington, Tent 11, has pledged $200,000 toward construction of the research center, which will be known as the Variety Club Research Center of Children's Hospital. This contribution will provide most of the matching funds for Government grants. The Hospital has Federal grants of $145,000 and $234,000 and a Ford Foundation grant of $75,000.

The new Center will be situated at 12th and W Streets, N.W., facing 12th Street, and will contain a basement and three stories. It will provide space and facilities for research in allergic diseases, antibiotics, cancer, leukemia, cerebral palsy, hematology, pediatric analgesics, psychiatry, and virus infections.

**Dr. Otis L. Anderson,** Chief of the Bureau of State Services of the **Public Health Service,** has been appointed to a newly created position in PHS, Assistant Surgeon General for Personnel and Training in the immediate office of the Surgeon General, Dr. Leroy E. Burney.

Dr. Anderson has had long experience in the Public Health Service, having spent his entire professional career in the Service. He graduated in 1929 from the College of Medicine of the University of Nebraska and interned at the Service's Hospital in Baltimore. His duties have included medical practice and hospital administration as well as the more traditional types of public health work.

**Dr. David E. Price,** formerly Deputy Chief of the Service's Bureau of Medical Services, succeeded Dr. Anderson as Chief of the Bureau on October 1. Dr. Price is a graduate of the University of California School of Medicine and of the Johns Hopkins School of Public Health, Baltimore. In 1950, he was named Associate Director of the National Institutes of Health, and two years later, he became Assistant Surgeon General in the Office of the Surgeon General. In March of this year he was named Deputy Chief of the Bureau of Medical Services.

**Dr. Frank J. Schaffer,** Chief of the Physical Medicine and Rehabilitation Service at the Veterans Administration Medical Teaching Group Hospital in Memphis, Tennessee, has been appointed Chief of Program Development in the same service in Washington, D. C. He succeeds Dr. Frederick J. Balsam, who now is Assistant Chief of the Physical Medicine and Rehabilitation Service at the VA Hospital in Fort Howard, Maryland.

Dr. Schaffer is certified by the American Board of Physical Medicine and Rehabilitation. Among his responsibilities in Washington will be further development of the career residency program in physical medicine and rehabilitation, the second largest career residency program in VA.

**Mr. Isadore Seeman,** Executive Director of United Community Services since 1954, has been named Executive Director of the recently organized **Health and Welfare Council of the National Capital Area.**

The Health and Welfare Council of the National Capital Area, organized to coördinate and improve health and welfare planning and budgeting for the entire metropolitan area, went into effect on August 1. The new agency combines the services formerly offered by the Community Chest Federation of the National Capital Area, the Arlington Community Chest and Council, the Community Chest of Fairfax County and Falls Church, the Community Planning Council of Fairfax County and Falls Church, the Montgomery County Chest and Council, the Community Chest and Planning Council of Prince Georges County, and United Community Services, Washington's Community Chest and Planning Council.

**The District of Columbia Division of the American Cancer Society** announces that its programs of education and direct service to cancer patients will be accelerated during the coming year due to the generous response of the public to the 1957 Cancer Crusade. A total of $85,709 has been designated in the budget for service to cancer patients for the year beginning September 1. Included in this amount is $75,443.56, to be allocated to the following hospitals and institutions to assist in the diagnosis and treatment of cancer: Children's Hospital, Episcopal Eye, Ear and Throat Hospital, Garfield

GROUND-BREAKING CEREMONIES FOR NEW SMA BUILDING

Dr. Harry Lee Claud, Councilor from the District of Columbia to the Southern Medical Association, assists with the spadework at the ground-breaking ceremony in Birmingham, Alabama, Sunday a.m., August 4, 1957. The new, $225,000 headquarters office building will be located at Highland Avenue and Niazuma on the Southside. Dr. J. P. Culpepper, Jr., of Hattiesburg, Miss., President of Southern, presided and turned the first spadeful of earth. Ten members of the Council were present and all took part in the actual ground-breaking. Several are shown here awaiting their turn and lending encouragement to Dr. Claud.

Memorial Hospital Tumor Clinic, George Washington University Hospital, Georgetown University Hospital, Howard University, the Visiting Nurse Association, and the Washington Home for Incurables. The Society has also designated a grant to the District of Columbia Medical Society to be used to finance a special study on cancer of the cervix. This project is related in more detail under In and Out of Focus, page 549.

The Homemaker Service, started experimentally in 1956–57 to provide assistance in the home to cancer patients and their families, will be expanded during the coming year. Provision also is made for continuing financial aid to needy patients for chemotherapy in the treatment of cancer. Other services to cancer patients include free dressings and maintenance of a Gift and Loan Closet from which cancer patients can obtain, free of charge, a wide variety of sick room equipment.

A sizable portion of the budget, $71,634.52, will be devoted to professional and community education. Forty per cent of the money received by the District Division is sent to the National Office, which provides large grants for cancer research.

## PERSONALS

**Dr. Thomas Parran,** Dean of the Graduate School of Public Health, University of Pittsburgh, an Honorary member of the District Medical Society, left the United States on August 13 with 4 other public health physicians on a four-week exchange mission to the Soviet Union. Dr. Parran is Chairman of the Mission, which was arranged by the Public Health Service in coöperation with the U. S. Department of State.

A reciprocal Soviet Union public health commission will visit the United States in October.

**Dr. Walter A. Bloedorn,** who retired as Dean of George Washington University School of Medicine and Medical Director of the Hospital on September 1, was feted by 875 Hospital employees, including the house staff, on August 30. The reception was held in the Hospital's conference room, where hangs the recently completed portrait of Dr. Bloedorn, presented to the University by associates and former students at one of many former dinners and receptions held in appreciation of his long service to the Medical School.

**Dr. Jospeph J. Bunim,** an Associate member of the Medical Society, was elected First Vice President and President-elect of the American Rheumatism Association, which held its meeting in conjunction with the Ninth International Congress on Rheumatic Diseases, in Toronto, Canada, June 23–28.

**Dr. Maxwell Boverman,** Clinical Instructor in Psychiatry, George Washington University School of Medicine, was recently made an honorary member of the Tokyo Institute for Psychoanalysis.

Dr. Boverman has been appointed to the visiting staff of Sheppard and Enoch Pratt Hospital in Towson, Maryland, where he will participate as a consultant in the psychiatric training program.

**Dr. Philip Bloemsma** was recently honored by members of the "Lost Battalion" who held a reunion in Mineral Wells, Texas, August 16. He was presented with a plaque inscribed "in sincere appreciation for unselfish efforts to the members of the Lost Battalion and U.S.S. Houston" and with a silver spoon mounted on another plaque.

Dr. Bloemsma, a native of Holland, was a Netherlands Army Surgeon during World War II and became a prisoner of war on Java along with some 650 members of the Second Battalion of the United States Army's 131st Field Artillery Regiment. Later on this unit became known as the "lost battalion"—lost in the jungles of occupied Burma and Thailand as forced labor to build a railroad linking the two countries.

When a tropical skin ulcer afflicted many of the American prisoners, Dr. Bloemsma was drafted to care for their sick. The hospital he used was a mobile bamboo tent. In place of medicine, he used green peas and homemade yeast. For a surgical instrument, he manufactured one from a fork shorn of its teeth and bent into the shape of a spoon. From the latter came the nickname, "Dr. Spoonsma," by which he was affectionately known, and the idea for the plaque with the mounted spoon. Dr. Bloemsma was credited with the low mortality rate among American prisoners.

**Dr. Bernard Notes** was inducted into fellowship in the International College of Surgeons in Chicago, September 12. Convocation and induction of new members was the closing event of the 22nd Annual Congress of the College.

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| September 1 | Dr. Robert P. Odenwald | Some Common Problems of the Church and Psychiatry | NBC-TV, Catholic Hour |
| September 5 | Dr. Addison M. Duval, *Chairman*<br>Dr. Marvin E. Perkins, *Panelist* | The Emotionally Disturbed Child: Who is he? How can he be helped?—Panel Discussion | In-Service Program, Public School Teachers Conference |
| September 10 | Dr. Benjamin Karpmen | The Real and Imaginary in Psychiatry | Samuel Gompers Masonic Lodge |
| September 16 | Dr. Elbert T. Phelps | Asian Influenza | D. C. Business and Professional Women's Club |
| September 17 | Dr. Paul B. Cornely, *Presiding*<br>Dr. Marvin E. Perkins, *Panelist* | Services of the D. C. Department of Public Health: Mental Health Needs and Services | Health and Welfare Council of the National Capital Area |

## PAUL JOSEPH KELLEY, M.D.

## (1909–1957)

Dr. Paul J. Kelley, general practitioner in Washington for many years, died, August 23, in Providence Hospital. He had maintained both home and office at 1626 Minnesota Avenue, S.E., since 1946.

Dr. Kelley was born in Providence, Rhode Island, January 25, 1909, to the late J. Paul and Madeline S. Kelley. Coming to Washington as a young boy, he attended the District public schools and graduated from Gonzaga High School. He received his medical degree from Georgetown University, Class of 1938, and interned the following year at the D. C. General Hospital. He returned to Georgetown University as a Fellow in Pathology (1939–40). The next year he was resident physician in pathology and surgery at Georgetown Hospital and from 1941–42, in obstetrics, at Columbia Hospital for Women.

At the completion of his postgraduate training, World War II had begun and Dr. Kelley enlisted in the Medical Corps of the U. S. Navy. He served for four years, from 1942 to 1946, which included two years of overseas service with the 76th U. S. Naval Construction Battalion. He participated in the Guam campaign. When separated from service, he held the rank of Lieutenant Commander.

Dr. Kelley was an Active member of the Medical Society of the District of Columbia from 1947 to 1956. He was a member of St. Teresa's Church and the Holy Name Society.

He is survived by his wife, Mrs. Katherine Hamilton Kelley, and five children, Paul, Jr., Jeremiah Allen, John, Mary Kathleen, and Mary Eileen. He is also survived by a sister, Mrs. Edwin G. Kerans, of Rockville, Maryland, and a brother, Mr. Maurice E. Kelley, of Kaiserlautern, Germany.

### Surgery of Pulmonary Tuberculosis—Nolan

*(Continued from page 524)*

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*(Continued from page 562*

by Phyllis Anderson. Price, $18.50. Pp. 630, with 216 illustrations. New York: Hoeber-Harper, 1957.

**Psychopathic Personalities.** Harold Palmer, M.D. Price, $4.75. Pp. 179. New York: Philos. Libr., 1957.

**From Sterility to Fertility. A Guide to the Causes and Cure of Childlessness.** Elliot E. Philipp, M.A., M.B., B.Chir., F.R.C.S., M.R.C.O.G. Price, $4.75. Pp. 120. New York: Philos. Libr., 1957.

**New Research Techniques of Neuroanatomy. A Symposium Sponsored by the National Multiple Sclerosis Society.** Edited by William F. Windle, Ph.D., Sc.D., Chief, Laboratory of Neuroanatomical Sciences, National Institute of Neurological Diseases and Blindness, National Institutes of Health, Bethesda, Maryland. Foreword by Frederick L. Stone, Ph.D., Director, Medical and Scientific Department, National Multiple Sclerosis Society, New York, New York. Price, $4.75. Pp. 98. Springfield, Ill.: Thomas, 1957.

# MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP

## WASHINGTON, D. C.

## 1957–1958

| SOCIETY | PRESIDENT | SECRETARY | NO. MEETINGS PER YEAR | DATE OF MEETINGS | PLACE OF MEETING |
|---|---|---|---|---|---|
| Academy of Medicine of Washington, D. C. | W. Davis | E. C. Albritton | 3 | Nov., Jan., May or June | Cosmos Club |
| American Academy of General Practice, D. C. Chapter | C. R. Kurtz | B. Miller | 4 | Oct. 23, Dec. 17, Feb. 25, Apr. 22 | MSDC Building |
| American Federation for Clinical Research, D. C. Chapter | A. E. Parrish | H. W. Schnaper | 4 | 2nd Monday, Oct., Dec., Feb., Apr. | MSDC Building |
| American Medical Writers' Association, Mid-Atlantic Chapter | I. P. Frohman | Mrs. F. A. Cooksley | 2 | On call | National Press Club |
| Clinical Club of Washington | H. P. Dorman | M. J. Fischer | 6 | 1st Tuesday | Kennedy-Warren |
| Clinical Society of Diabetes Association | D. E. DeLawter | M. H. Rosenberg | 4 | On call | |
| Clinico-Pathological | W. W. Boyd | M. deG. Ruffin | 8 | 3rd Tuesday | Homes |
| Diabetes Association | A. G. Saidman | L. K. Alpert | 4 | On call | MSDC Building |
| Georgetown Clinical | C. F. Hill | T. B. McMahon | 8 | 3rd Wednesday | Hotel 2400 |
| George Washington University | D. H. Leeper, Jr. | J. R. Creer | 4 | Oct., Feb., Mar., May | |
| Hippocrates-Galen | R. G. Klepser | C. Berg | 6 | Nov. 7, Jan. 9, Feb. 6, Mar. 6, Apr. 3, May (?) | Kennedy-Warren |
| International Medical Club | W. H. Jenkins | A. A. Morris | 4 | On call | Mayflower Hotel |
| Jacobi | S. Ross | M. O. Goodman | 8 | 3rd Monday | Willard Hotel |
| Jefferson Medical College Alumni Association | F. W. Konzelmann | S. L. Rollins, Jr. | 2 | Dec., May | |
| Kober | W. D. Foote | K. H. Wood | 10 | 1st Monday | Army-Navy Club |
| Louis Mackall | H. Dorman | J. H. Peacock | 7 | 3rd Thursday | Kennedy-Warren |
| Medical Arts | R. J. Fields | G. K. Palmes | 8 | 2nd Thursday | Kennedy-Warren |
| Metropolitan Health Officers' Association | R. G. Beachley | T. S. Englar | 4 | Oct., Jan., Apr., July | Prince Georges Country Club |
| Northern Virginia Academy of Surgery | J. E. Alexander | M. A. Puzak | 3 | Oct., Jan., Apr. | |
| Osler | H. S. Sabin | H. H. Hawfield | 8 | 3rd Monday (except Dec. 9) | Homes |
| Pan American Society, D. C. Branch | F. R. Leyva | D. F. Lynch | 4 | Oct., Dec., Feb., May | Mayflower Hotel |
| Physician-Veterans of World War II | J. O. Nestor | R. A. Osbourn | 2 | Dec. 7; on call | |
| Providence Hospital Doctors Alumni Association | V. J. DiFrancesco | D. R. Lenarduzzi | 12 | 3rd Sunday | Providence Hospital |
| Rheumatism | R. H. Wichelhausen | M. H. Stolar | 5 | On call | |
| St. Elizabeths Hospital | P. Chodoff | P. G. Angelos | 3 | Oct. 25, Feb. 28, Apr. or May | |
| Society of Anesthesiologists | W. E. Bageant | T. F. McDermott | 4 | Nov. 4, Dec. 16, Mar. 10, May 12 | MSDC Building |
| Society of Internal Medicine | H. D. Ecker | F. S. Bacon | | On call | MSDC Building |
| Trudeau Society | O. R. Farley | M. Gusack | 4 | On call | |

NOTE: Most of these societies begin their meetings in October and continue through April or May.

## MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP—*Continued*

| SOCIETY | PRESIDENT | SECRETARY | NO. MEETINGS PER YEAR | DATE OF MEETINGS | PLACE OF MEETING |
|---|---|---|---|---|---|
| Washington Academy of Neurosurgery | J. M. Williams | S. L. Rollins, Jr. | 4 | On call | Kenwood Country Club |
| Washington Academy of Surgery | H. H. Schoenfeld | A. F. Castro | 5 | 2nd Monday, Oct., Dec., Feb., Apr., May | Kennedy-Warren |
| Washington Gynecological | S. W. Hawken | R. B. Nelson, Jr. | 5 | Oct. 23, Dec. 4, Jan. 29, Mar. 26, May (?) | Columbia Country Club and Willard Hotel |
| Washington Homeopathic | W. P. Baker | H. H. Custis, Jr. | 4 | Oct., Jan., Mar., May | Columbia Country Club |
| Washington Medical and Surgical | W. M. Clopton | R. R. Stevenson | 7 | 4th Monday | Hotel 2400 |
| Washington Orthopedic Club | J. P. Adams | A. M. McKelvie | 7 | 1st Monday | MSDC Building |
| Washington Psychiatric | S. J. Rosenberg | M. L. Adland | 8 | 4th Friday | MSDC Building |
| Washington Psychoanalytic | A. Halperin | S. Berman | 7 | 2nd Friday | 1720 M Street N. W. |
| Washington Society of Pathologists | T. Winship | T. B. Dunn | 8 | Oct. 14, Nov. 5, Dec. 4, Jan. 9, Feb. 3, Mar. 4, Apr. 2, May (?) | Armed Forces Institute of Pathology |
| Washington Urological | H. S. Sabin | G. R. Gable | 6 | Every 6 weeks | Doctors Hospital |
| Women's Medical | S. S. Martin | V. R. Jaffe | 7 | 1st Tuesday | MSDC Building |

## SECTIONS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

### 1957–1958

| SECTION | CHAIRMAN | SECRETARY | NO. MEETINGS PER YEAR | DATE OF MEETINGS | PLACE OF MEETING |
|---|---|---|---|---|---|
| Anesthesiology | W. E. Bageant | T. F. McDermott | 4 | Nov. 4, Dec. 16, Mar. 10, May 12 | MSDC Building |
| Dermatology and Syphilology | N. M. Kanof | P. N. Horvath | | On call | MSDC Building |
| Gastroenterology | W. H. Ferguson | W. K. Billingsley, Jr. | 4 | 1st Monday, Oct., Dec., Feb., Apr. | Kennedy-Warren |
| General Practice | W. R. Perkins, Jr. | W. B. Morse | 4 | 4th Tuesday | MSDC Building |
| Internal Medicine and Allied Subspecialties | M. J. Foret | F. S. Bacon | | On call | MSDC Building |
| Neurology and Psychiatry | S. L. Rollins, Jr. | D. S. O'Doherty | 5 | 1st Thursday, Oct., Jan., Mar., May (and Nov. 1) | MSDC Building |
| Ophthalmology | M. N. Stow | W. J. Romejko | 4 | Oct. 29, Dec. 10, Feb. 11, Apr. 8 | Kennedy-Warren |
| Otolaryngology | J. J. McFarland, Jr. | M. E. Krucoff | 3 | Nov. 12, Jan. 14, May 13 | Army-Navy Club |
| Pathology and Laboratory Medicine | K. L. McCoy | G. H. Guin | 9 | 4th Friday | Homes |
| Pediatrics | G. Maksim | J. E. Cassidy | | On call | |
| Radiology | F. V. Schumacher | C. E. Bickham, Jr. | 4 | 3rd Wednesday, Oct., Jan., Mar., May | MSDC Building |

# Book Reviews

**The Treatment of Burns.** Curtis P. Artz, M.D., F.A.C.S., Lt. Col., MC, USA (Ret.), and Eric Reiss, M.D. Price, $7.50. Pp. 250, with 199 illustrations on 105 figures. Illustrations by Burr Bush. Philadelphia: Saunders, 1957.

This relatively small volume is a very highly recommended text for all segments of the medical and paramedical population who in any way come into contact with burns, i.e., first aid workers, medical students, generalists, and surgeons.

As the preface states, the burn wound evokes a systemic response reflected as a myriad of pathophysiologic processes. Proper care of the burned patient requires the integration of many aspects of therapy such as fluid balance, wound management, anesthesia, surgical technic, nutrition, treatment of infection, physiotherapy, and psychotherapy. It is in the burned patient that the science and the art of medicine meet. Undue preoccupation with one or two facets at the expense of others may lead to disastrous consequences.

Because of the complexity of the problem, studies are more effectively carried out by a research team than by an individual. In 1949, the Surgical Research Unit of the Brooke Army Medical Center began to develop such a team for the treatment and investigation of burns. In the seven years that followed, more than 1,000 burned patients were admitted for treatment. The bulk of the material presented in this book is a synthesis of the knowledge that has been gained from this experience.

Emmett P. Madigan, M.D.

**The Specialties in General Practice,** 2nd edition. Edited by Russell L. Cecil, M.D., and Howard F. Conn, M.D., with articles by 15 contributors. Price, $16.00. Pp. 780, with 76 figures. Philadelphia: Saunders, 1957.

The list of 15 excellent contributors reads like a Who's Who in Medicine and Surgery. All of these physicians are outstanding men in their field and are associated with leading medical schools in this country.

This volume, as its predecessor published in 1951, is meant to be a ready handbook for the busy physician in which he might find brief and practical descriptions of how to handle the less serious problems in the various special fields. All of the major specialty fields are adequately touched upon. The presentations are excellently expounded and concise, and completeness and exactness have not been sacrificed. The abundance of diagrams and plates have been reproduced with clarity and sharpness. These are always an asset in this type of volume.

It was my pleasure to review the first edition of this book. I find that the change to a white paper makes this edition much easier to read.

"The Specialties in General Practice" would be an asset to any physician's library since there are times when even the specialist must delve into books of other specialties for reference. This volume would be a helpful ready reference for the general physician.

I. Phillips Frohman, M.D.

**William Harvey, His Life and Times: His Discoveries: His Methods.** Louis Chauvois. Price, $7.50. Pp. 271. New York: Philos. Libr., 1957.

In the medical world, unfortunately, poor writing, poor use of words, and lack of clarity in style are all too prevalent. When these occur in a scientific paper, we may deplore it, but, possibly, can excuse it on the ground that the author is not a trained literary man. When they occur, however, in a book whose appeal is directed at the lay, as well as professional, public and whose only reason for being is to surpass previous similar works, no excuse for shoddiness can be allowed. Whether this particular volume has lost enough in translation to explain its inadequacies cannot be said, but it would seem that even the most inept translation could not produce so confused and dull a picture were the original writing of first quality. The lack of continuity and coherence, the haphazard changing of tense, the *non sequiturs* and intercalated paragraphs all produce a distressing lack of lucidity. Flights of fancy, imaginary conversations, and attempts to probe into a man's thinking (when no documentation of these things exists) are all, in this reviewer's mind, illegitimate in a purportedly accurate and impartial biography, particularly when perpetrated by a man of science whose training must demand truth and proof.

Dr. Chauvois is certainly to be commended on a detailed study of William Harvey. His knowledge of the medical practitioners, writers, and teachers of the early Seventeenth Century, both in Great Britain and on the European continent, is obviously vast and comprehensive. His investigations of the important and fascinating historical documents relating to this era must be almost unique in their breadth of scope. He is clearly a competent Latin scholar. But he lacks the ability to portray effectively that which he obviously understands so well and has the unfortunate tendency to interpolate when he cannot really know. His adulation for the "discoverer" of the circulation of the blood is manifest throughout the book, but his attempts to impart to an undoubtedly very great man qualities which to a dispassionate observer are not evident make his whole thesis lose force.

Other men have written about Harvey and have written well. This volume lends luster neither to the author, the translator, nor—and most important—to the chief protagonist.

Charles W. Ordman, M.D.

(*Continued on page 48*)

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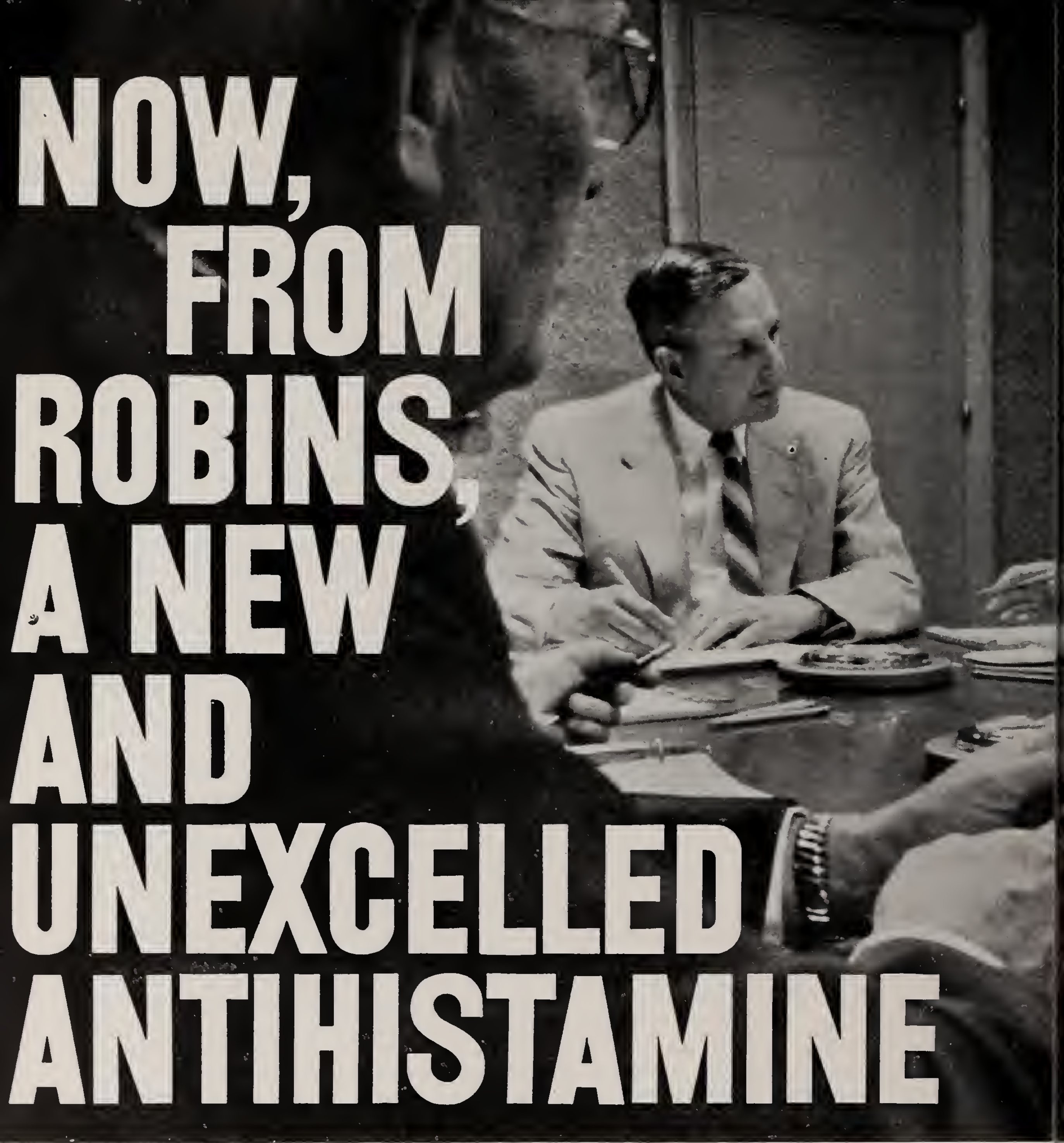

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|---|---|---|---|---|---|---|
| | | Excellent | Good | Fair | Negative | |
| Allergic rhinitis and vasomotor rhinitis | 30 | 14 | 9 | 5 | 2 | Slight Drowsiness (3) |
| Urticaria and angioneurotic edema | 3 | 1 | 1 | 1 | | Dizzy (1) |
| Allergic dermatitis | 2 | | 1 | 1 | | Slight Drowsiness (2) |
| Bronchial asthma | 1 | | 1 | | | |
| Pruritus | 1 | | 1 | | | |
| Total | 37 | 15 | 13 | 7 | 2 | Drowsiness (5)<br>Dizzy (1) 16.2% |

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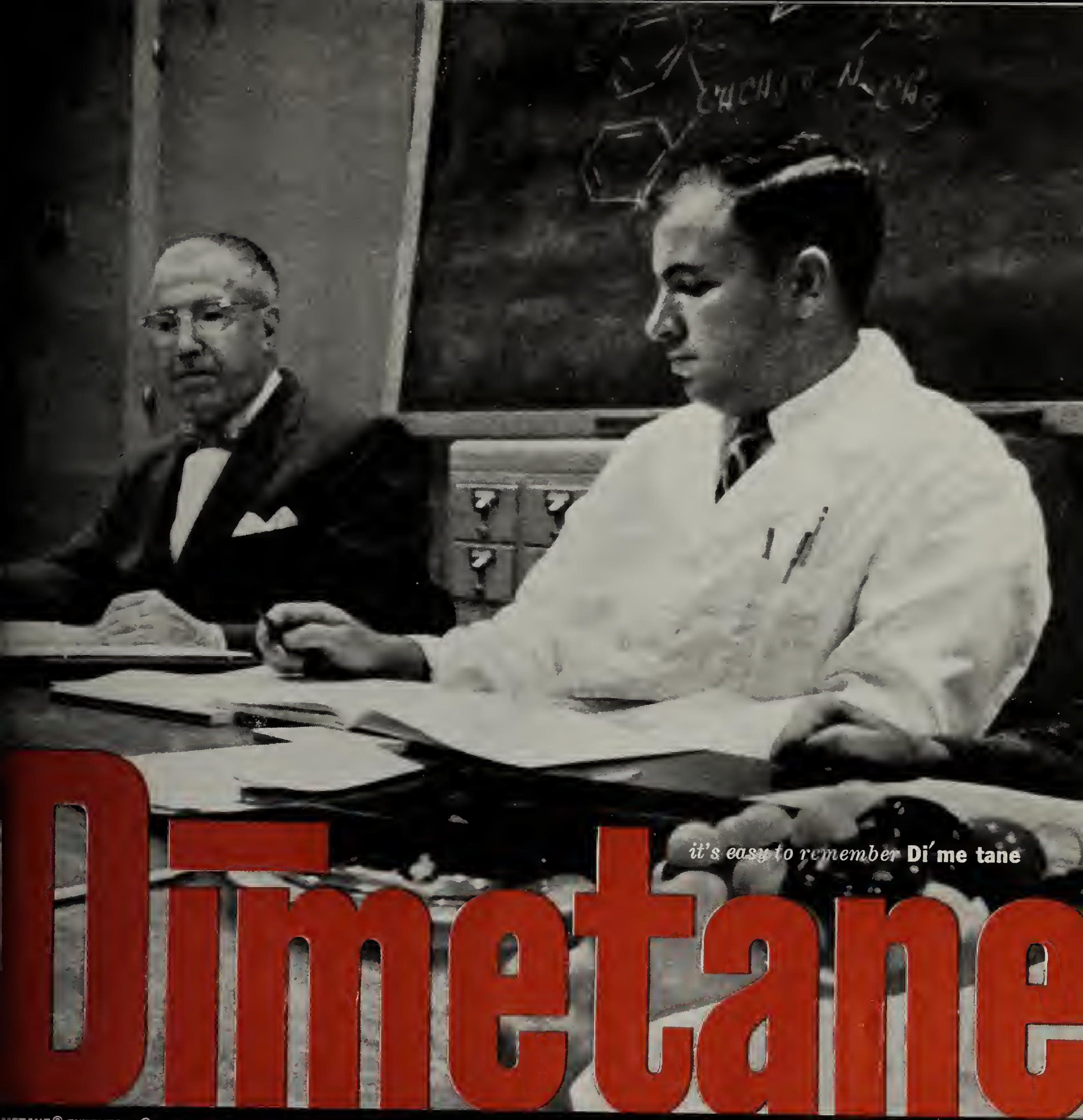
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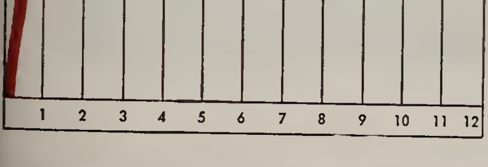

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*Children 3-6—½ tab. or one teaspoonful Elixir t.i.d.*

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## Book Reviews

(*Continued from page 45*)

**Epilepsy—Grand Mal, Petit Mal, Convulsions.** Letitia Fairfield, C.B.E., M.D., D.P.H. Price, $4.75. Pp. 159. New York: Philos. Libr., 1957.

This little book for the general public attempts to give a complete and realistic picture of what is today known about epilepsy and the problems of epileptics and their families. Since the author is an English physician, it is intended primarily for an English audience. Although this diminishes its value for the American lay public, the facts about epilepsy are clearly and simply presented in a straight-forward manner without the kind of excessively dramatic approach sometimes encountered in publications of this kind. The social, economic, educational, and legal problems of the epileptic are particularly well treated, so that with the caveat mentioned above, it is a book which any physician can profitably recommend to patients or families concerned with epilepsy.

Paul Chodoff, M.D.

**Evaluation of the 1954 Field Trial of Poliomyelitis Vaccine.** Final Report by Thomas Francis, Jr., M.D.; John A. Napier; Robert B. Voight, B.S.; Fay M. Hemphill, Ph.D.; Herbert A. Wenner, M.D.; Robert F. Korns, M.D.; Morton Boisen, B.A.; Eva Tolchinsky; and Earl L. Diamond, M.A. Lithoprint. Pp. 563. New York: National Foundation for Infantile Paralysis, 1957.

This volume is a masterful example of statistical and epidemiologic methodology and experiment design, as well as a chronicle of the administrative chore of organizing the mammoth 1954 Field Trial of Poliomyelitis Vaccine.

After summarizing the already well-known results and conclusions, the authors present in detail the organization, design and conduct of the trial, the statistical methods used in processing records, and the details of investigation of clinical cases of poliomyelitis in the study population, including clinical and laboratory criteria for diagnosis. Further details regarding measurement of vaccine potency, reactions to vaccine, and the question of provocation of disease by vaccine are presented. The relationship of "orphan" virus strains to clinically paralytic cases is discussed.

A brief summary of field trials in Canada and Finland is included.

An extensive appendix illustrates the many report and classification forms and letters used in collecting and analyzing data.

From a historical standpoint, this pioneering field trial, of monumental proportion, boldly conceived, and executed with utmost attention to detail of experiment design and statistical control, will undoubtedly form the basis for future similar trials of immunizing agents.

Allan B. Coleman, M.D.

(*Continued on page 49*)

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## Book Reviews

(*Continued from page 48*)

**Ciba Foundation Symposium on Porphyrin Biosynthesis and Metabolism.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H.W.C., A.R.I.C., Editors for the Ciba Foundation. Price, $6.75. Pp. 308, with 70 illustrations. Boston: Little, 1955.

This is another in the generally excellent CIBA Foundation Symposium series and is a compilation of the first international conference on porphyrin metabolism, held in February, 1955. As such it deals with both normal and abnormal porphyrin synthesis. Since porphyrins are synthesized in nearly every mammalian cell, and since they are essential for life, this is an extremely important subject.

However, this book is one for those intimately connected with porphyrins and their chemistry. It can hardly be recommended for the average practitioner, nor is it intended in their direction.

The one criticism, and this be hardly a severe one, is that the field has moved rapidly enough in the past few years so that the frontiers are now considerably in advance of this recently published book. However, for its purpose, that of an authoritative advanced summary of work on porphyrins to the date of the conference, it is good and can be well recommended.

Paul R. McCurdy, M.D.

**Ciba Foundation Colloquia on Endocrinology. Volume 9. Internal Secretions of the Pancreas** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecillia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $7.00. Pp. 292, with 100 illustrations Boston: Little, 1956.

This text is the latest of several superb colloquia dealing with metabolic subjects. Prepared within the setting of an informal meeting of outstanding investigators, it combines the latest information on the internal secretions of the pancreas with both the methods of obtaining this knowledge and its appraisal by other investigators. This book is particularly rich in information dealing with the hyperglycemic hormone of the alpha-cells. There are pertinent data dealing with the nature of insulin and its action.

This text is not recommended for the student or for the majority of practicing physicians. It should be of great value to any scientist, clinical or basic, who is interested in metabolism, and should be in the library of all concerned with diabetes.

Laurence H. Kyle, M.D.

**Recent Observations**

On Self-Regulated Schedules For Infants

Genetically acquired behavioral predispositions enable the normal baby to regulate its feeding intake and periodic hunger sensations, its feeding habits. These physiological regulatory forces may be satisfied by adapting the formula content and feeding period to the individual needs of the infant. It involves a sensible compromise between too rigid a schedule, geared to the clock and too lax a schedule, based on self-demand feedings. Such is the current objective: for either extreme can lead to infant feeding difficulties.

The newborn may become a feeding problem if the prescribed formula is excessive or the feeding schedule rigid. Every time he is awakened abruptly from satisfying slumber to be fed forcefully, the baby gradually loses his enthusiasm for the food and begins to resist the feeding. The young infant may balk at the crude introduction of a new food or feeding procedure without the proper prelude of gradual adaptation of taste, color, consistency and quantity.

The older infant weaned from bottle to cup may reject milk or go on a hunger strike. Devoted to his bottle he resents its sudden deprivation. It takes a certain readiness for weaning to make that change agreeable. Later the infant becomes somewhat independent of his mother and arbitrary with his food. What he enjoyed yesterday, he rejects today. If he distorts the diet for a day and his mother resorts to force, a feeding problem is in the making. Sensible decorum will solve these little difficulties before they become big behavior disturbances in childhood.

The problems of infant feeding are always the same but solutions may differ with each era. The carbohydrate requirement for all infants is as completely fulfilled by KARO® Syrup today as a generation ago. Whatever the type of milk adapted to the individual infant, KARO may be added confidently because it is a balanced mixture of low sugars, easily mixed, well tolerated, palatable, hypoallergenic, resistant to fermentation, easily digestible, readily absorbed, non-laxative. Readily available in all food stores.

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MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI *November*, 1957 NUMBER 11

# SUBDURAL EMPYEMA

JOHN P. GALLAGHER, M.D.
*Clinical Associate Professor of Neurosurgery, Georgetown University School of Medicine*

FRANKLIN E. McCOY, M.D.*
*Gratiot Community Hospital, Mount Pleasant, Michigan*

INVASION of the intracranial cavity by purulent disease of the air sinuses or the ear was a far more common occurrence in years gone by than it is today. Such intracranial extension of local sources of infection usually leads to meningitis, brain abscess, venous sinus thrombophlebitis and subdural empyema. Some of these pathologic processes are not so familiar to present-day physicians because of the widespread use of chemotherapeutic and antibiotic drugs. In spite of the almost routine use of these drugs in the treatment of purulent infections of the sinuses or the ear, sporadic cases of fatal intracranial sepsis continue to occur. In order to reëmphasize one of these complications, subdural empyema, a typical case is reported here. The patient in this report suffered from chronic purulent frontal sinusitis for many years. His infection eventually invaded the intracranial cavity and, finally, the subdural space. In spite of intensive therapy with modern drugs and prompt surgical treatment he displayed a relentless downhill course and died. The findings at autopsy were so typical that they are included in this report. It is hoped that this presentation will serve to reorient those who place complete confidence in the ability of antibiotic agents to control spreading purulent disease of the sinuses or the ear.

## Report of Case

J. W. W., a 63-year-old white male railroad employee, suffered from purulent frontal sinusitis for many years. For a month preceding his present illness, he complained of constant transfrontal headache as well as of a sensation of fullness in his nose. On the evening of October 24, 1954 he went to bed with a prostrating headache and several hours later was discovered to be in a delirium. He was taken to Providence Hospital, Washington, D. C. on October 25, 1954.

On admission to the hospital, he was comatose, restless, and kept picking at the bedclothes. His temperature was 102.2°F, the pulse rate 110, the respiratory rate 32, and the blood pressure 240/130. There was a slight swelling of the soft tissues around the left orbit and a slight proptosis of the left eye. The nasal passages and the ears showed no abnormal discharge. The neck was moderately stiff. The remainder of the general physical examination was normal. Shortly after entry into the hospital the patient had a series of convulsions and his stupor became worse.

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* Formerly Resident in Pathology, Providence Hospital, Washington, D.C.

Neurosurgical consultation was requested approximately 8 hours after admission. The examination showed a critically ill, elderly male in deep stupor. There was edema around the left orbit and stiffness of the neck. During the examination the patient frequently shivered and his left hand exhibited constant restless, reaching movements. The nose, mouth and ears showed no pathologic discharge. The optic fundi showed distention of the retinal veins, but the discs were not blurred. The upper lid of the left eye was drooped. The left pupil was enlarged, and there was an absence of medial movement of the left eye. A slight right central facial weakness was present. The patient moved all extremities, but the movements of the right upper limb were weak. The tendon reflexes in the upper and lower limbs were hyperactive and equally so on both sides. There was an equivocal Babinski sign present on the right side.

Lumbar puncture at this time showed that the spinal fluid was cloudy and was under a pressure of 250 mm. of water. The fluid contained 1,456 white blood cells with 97 per cent polymorphonuclear leukocytes. The total protein was 294 mg. per 100 ml., and the dextrose content was 108 mg. per 100 ml. A smear of the fluid showed no organisms on Gram stain. A culture was negative. The blood cell count showed 30,200 white blood cells with 91 per cent polymorphonuclear leukocytes. The hemaglobin and red blood cell count were normal. Urinalysis showed a specific gravity of 1.027 with negative tests for albumin and dextrose and a marked trace of acetone. Microscopic examination of the urine showed no abnormal findings. X-ray films of the skull were negative, and in particular there was no clearcut evidence of chronic sinus disease. X-ray films of the chest were normal.

About 4 hours after surgical consultation a trephine opening was made over the left frontal region. When the dura mater was opened, about 100 c.c. of grayish yellow, foul-smelling pus spurted out from the subdural space. The subdural space was thoroughly flushed out with saline, and a rubber drain was inserted into the subdural recess. At that time 1,000,000 units of long-acting penicillin was injected into the empyema cavity. Culture of the pus yielded a pure growth of anaerobic streptococci.

Systemic antibiotic therapy was started when the patient returned to his room. This consisted of 1,000,000 units of penicillin given every 12 hours by the intramuscular route and 500 mg. of Achromycin given every 6 hours by the intravenous route. A transfusion of 500 c.c. of whole blood was administered as a general supportive measure. In addition to the systemic administration of antibiotics, 1,000,000 units of penicillin was instilled directly into the subdural space through the drainage tube every day. During the next several days the patient displayed a progressively downhill course. The restless stupor continued, the temperature remained elevated, and there was a profuse drainage of pus from the trephine opening in the left frontal region. The right upper and lower limbs became completely flaccid. Biologic sensitivity studies of the organism indicated that no change in the antibiotic medication was required.

On October 27 a tracheotomy tube was inserted to relieve intermittent obstruction of the tracheal airway from increasing collections of mucus. Lumbar puncture was performed at intervals after operation and sufficient spinal fluid was allowed to drain off in order to open the subdural space and encourage free drainage. On October 29 progressive respiratory difficulty developed and the patient died.

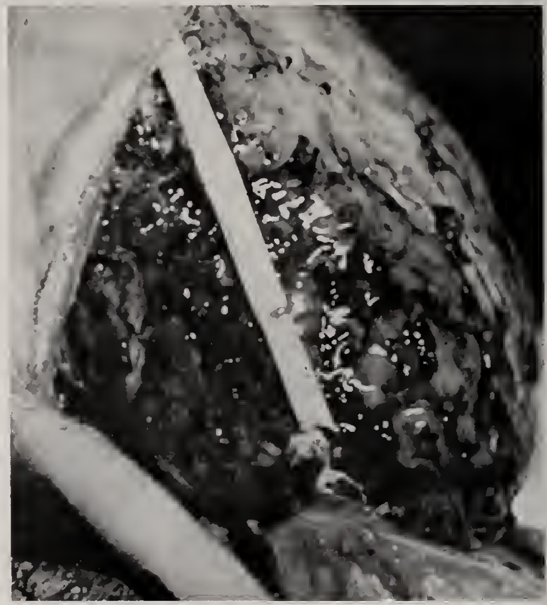

FIG. 1. Brain in situ showing drain occupying exposed left subdural space.

At necropsy the subdural space on the left side was found to be occupied by a thick, gray, purulent exudate, especially marked over the base of the brain (figure 1). In the right subdural space there was a similar exudate, although this was not as marked as the exudate on the left side. The left cerebral hemisphere displayed extensive superficial infarction of the cortex together with widespread thrombosis of the cortical veins. The cortical necrosis extended from the frontal to the occipital poles and was particularly marked over the frontal region (figure 2). When the dura was stripped off the floor of the skull, a round opening in the posterior wall of the left frontal sinus adjacent to the cribriform plate was encountered which measured 2.5 by 2.0 cm. A collection of pus occupied the epidural space over the communicating defect in the posterior wall of the sinus. The edges of the bony opening were ragged and necrotic, a condition suggesting long-standing osteomyelitis (figure 3). The interior of the left frontal sinus was filled with thick creamy pus. Section of the formalin-hardened brain demonstrated in many areas that the destruction of the cortex was complete and extended down to the white matter. The remaining sections of the brain, including the basal ganglia, brain stem, pons and cerebellum, were normal.

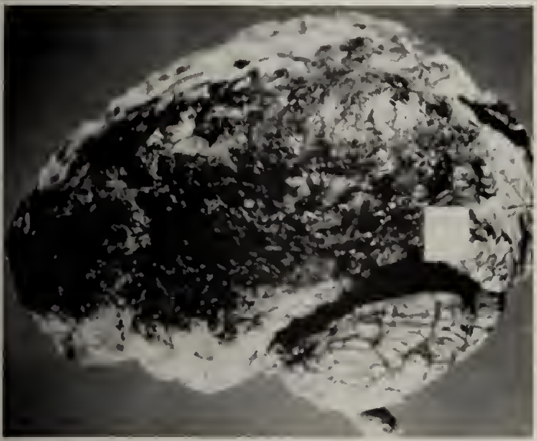

FIG. 2. Left cerebral hemisphere showing widespread thrombosis of the cortical veins and necrosis of the brain surface.

## SIGNS AND SYMPTOMS OF SUBDURAL EMPYEMA

In patients with a chronic infection of the sinuses or the ear an acute exacerbation accompanied by signs of systemic illness should arouse prompt suspicion of intracranial invasion. The illness usually starts with a chill and an acute rise in temperature along with intense headache. Swelling of the soft tissues around one or both orbits often occurs. This is especially true when the infection arises in the maxillary or frontal air sinus. Within 24 hours stiff neck, mental confusion, drowsiness, and vomiting are added to the picture and are conclusive signs of intracranial involvement. It is often noted at this time that the chronic discharge from the sinus or ear has mysteriously stopped. When pus begins to gather in the subdural space, neurologic signs appear. The stupor deepens, the stiff neck persists, and the pupil on the side of the intracranial lesion enlarges. The limbs on the contralateral side begin to show abnormal clinical signs. The tendon reflexes become more active, a Babinski sign usually appears, and eventually paralysis develops. Convulsive seizures frequently occur. The seizures may be unilateral or bilateral. After each convulsion or series of convulsions the stupor usually deepens and the paralysis becomes worse. These serious signs are the result of cerebral compression from the accumulation of pus as well as of thrombosis of the veins of the cerebral cortex beneath the inflammatory process. Papilledema is not often seen, although distention of the retinal veins is frequently present. Swelling about one or both eyes persists throughout the entire illness and, when unilateral, it indicates the side of the intracranial involvement. Tenderness or severe pain elicited by percussion of the head may give a clue to the side of the infection. When the left subdural space is invaded one of the earliest signs is aphasia.

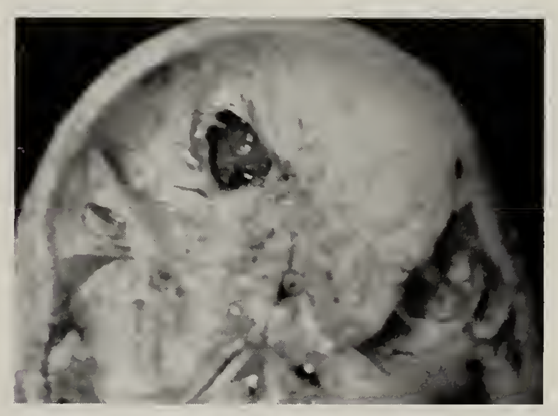

FIG. 3. Communicating defect in anterior cranial fossa perforating the posterior wall of the left frontal sinus.

The temperature remains elevated throughout the entire illness, ranging from 101° to 106° F. The temperature curve generally remains at a continuously elevated level and is not usually remittent in type. On lumbar puncture the cerebrospinal fluid will be found to contain a significant increase in white blood cells. The increase in cells may occur within 12 hours after the onset of the illness and confirms the presence of intracranial sepsis. The cells of the spinal fluid are mostly polymorphonuclears, and the count may range from 50 to 500 or more cells. The pressure is only slightly or moderately elevated. The protein content of the spinal fluid is always elevated, but the dextrose and chloride contents remain normal. Since the pus is confined to the subdural space and does not occupy the subarachnoid space, smears and cultures of the spinal fluid are negative for bacteria.

X-ray films often show signs of chronic suppuration of the sinuses or the mastoid. Although osteomyelitis is present in most cases it is frequently difficult to demonstrate it in the X-ray films. The blood count shows a marked increase in white cells, which range from 20,000 to 30,000 with a significant increase in polymorphonuclears.

The clinical course is progressively downhill, unless it can be arrested by surgical drainage of the inflammatory collection, and in fatal cases death occurs in a week or less.

## Discussion

Abercrombie[1] in 1834 was probably the first to describe a case of subdural empyema. The first successful surgical result was reported by Dumville[2] in 1858. The patient, Mary Driskell, aged 18 years, developed osteomyelitis of the cranial bones and later an abscess beneath the dura mater. Dumville cured her by trephining and then opening the dura to permit the escape of the pus. In another successful case the patient was treated in this way by Ceci and Onetti[3] in 1886. Macewen[4] in 1893 reported a similar case. Despite the attention drawn by these surgical results the general clinical knowledge of this condition was limited. In most cases the diagnosis was made after death by the pathologist. In 1912 Preysing[5] summarized the scanty facts then known regarding subdural purulent lesions and emphasized the ear as the primary source in most cases. Blegvad[6] in 1910 and Reudi[7] in 1930 also stressed infections of the ear as the origin of subdural empyema.

An important contribution was made by Bisgard[8] in 1932. He described a particularly rapid and fatal form of subdural empyema. Arising from purulent disease of the frontal sinus, the infection gained entrance into the subdural space and spread rapidly over the cerebral hemispheres. Later Courville,[9] Geraghty,[10] and Ray[11] reported similar cases in which the subdural infection did not permit the formation of circumscribed adhesions to restrain it, and in all cases extensive thrombophlebitis of the cortical veins was the characteristic pathologic feature. Comprehensive and illuminating pathologic studies of subdural empyema were documented by Kubik and Adams[12] in 1943 and by Courville[13] in 1944. When the chemotherapeutic and the antibiotic drugs became available for general use the lethal character of subdural empyema was reduced somewhat. Thus Schiller, Cairns and Russell[14] reported in 1948 on the use of these drugs in the treatment of this condition. After the use of these drugs both by the systemic route as well as by direct instillation into the infected subdural cavity, 7 of 15 patients recovered.

It is likely that long-standing osteomyelitis of the walls of the involved sinus precedes intracranial invasion in most of these cases. The entrance of bacteria into the bony wall of the sinus causes destructive necrosis of that structure. This process may take weeks or months. After the dura mater is reached by the invading infection, it too becomes involved and then the infection reaches the subdural space. Once inside the subdural space, the infection spreads rapidly since there are no compartments in this space to restrain it. There is little doubt that the coma as well as the convulsions, the paralysis and the fatal issue are all due to extensive thrombosis of the veins of the cerebral cortex. In the case reported here the cortex showed extensive destruction as a result of surface infarction.

Chronic infections in the air sinuses and in the ear are notoriously obstinate to treat. Treatment of patients with such chronic infections with chemotherapy and antibiotics usually fails to cure the condition. It is a singular fact that even after harboring a chronic infection for many years, these patients rarely demonstrate any substantial resistance to the organism once it escapes from its usual habitat. In this regard the patient presented in this report is characteristic—he displayed no clinical response to the modern drugs and seemed to possess no useful immunity to his infection. It is also noteworthy that males are more susceptible than females to intracranial complications of purulent sinus or ear disease. Kubik and Adams,[12] in a series of 14 patients, reported 13 males. Other authors also have noted a preponderance of males.

In the first stage of intracranial sepsis it is difficult to tell whether the patient is suffering from meningitis, sinus thrombosis, brain abscess or subdural empyema. Patients with meningitis usually become comatose soon after the onset of the acute illness. The cellular response in the cerebrospinal fluid is great, and the fluid becomes purulent at an early stage. Reduction of the level of dextrose in the spinal fluid is more marked in meningitis than in any other disease. Furthermore, bacteria in the fluid can be detected easily by the use of bacteriologic methods. Thrombosis of the superior sagittal sinus or the transverse sinus results in early choking of the optic discs. The clinical course is generally slow, and stiffness of the neck is not often present. It must be admitted that in many respects thrombosis of the major intracranial venous sinuses may closely resemble subdural empyema. The high fever, stupor, paralytic signs, convulsions, and spinal fluid findings may be almost identical in both conditions. In brain abscess the clinical course is slow. The headache with abscess is not so intense. The temperature may be elevated only a degree or so and in many cases is subnormal. Bradycardia is a characteristic feature of the brain abscess. Onset of paralytic signs is apt to be delayed, and when they do appear they are slow and progressive. With brain abscess, the cells in the spinal fluid at first are polymorphonuclears and later lymphocytes.

Once the diagnosis of subdural empyema is suspected, trephine openings in the skull should be made as quickly as possible. Any surgical treatment which is not applied directly to ridding the patient of the intracranial collection of pus should be condemned. After the intracranial infection has been brought under control, surgical treatment of the source of the infection in the sinus or the ear then may be carried out.

## SUMMARY

Chronic purulent disease of the air sinuses or the ear continue to give rise to sporadic cases of intracranial sepsis. In some instances this results in the formation of subdural empyema. A typical case is reported here. Death occurred despite early surgical intervention and intensive therapy with modern drugs. The autopsy findings are presented and discussed. The signs and symptoms of subdural empyema are presented along with the differential diagnosis. Emphasis is directed to those patients with chronic disease of the cranial air sinuses who suddenly become ill for no immediately apparent reason. Attention is also directed to the urgency for prompt surgical drainage in patients with subdural empyema.

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# METASTATIC CARCINOMA OF THE LIVER SIMULATING THE "ACUTE SURGICAL ABDOMEN"

## Report of Three Cases

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THE CLINICAL ASPECTS of primary and metastatic carcinoma of the liver have been comprehensively described in the modern standard texts and reference works on gastroenterology, as well as in the current literature.[1, 2, 3] However, it has become apparent to us that one facet of this subject merits emphasis. It concerns a stage of extremely rapid development of the disease which gives rise to clinical signs simulating an "acute surgical abdomen" and may present itself so forcefully as to engender great difficulty in the differential diagnosis. It is the purpose of this article to cite such occurrences and point out the importance of their recognition, lest surgical intervention be unnecessarily undertaken. In the group of patients herein reported one was subjected to needless laparotomy, another barely escaped it, and in the third a number of aspirations of the liver were performed, yielding large quantities of material erroneously thought to represent amebic pus because of the characteristic "anchovy sauce" appearance.

### Report of Cases

**Case 1.** A 57-year-old white man was admitted to the hospital because of chills and fever of 2 months' duration, along with aching in the chest and both shoulders. There had been a weight loss of 25 lbs. For many years the patient had had occasional episodes of rather vague abdominal distress lasting about a half hour at a time and only partially relieved by alkalis. He had been a heavy drinker for many years.

Physical examination revealed a well-developed, slightly dyspneic man who showed evidence of some weight loss. The temperature was 101°F, the pulse rate 100, and respiratory rate 20. The blood pressure was 130 systolic and 80 diastolic. The chest was barrel-shaped, and expansion was limited bilaterally. The percussion note was hyper-resonant throughout both lung fields and the breath sounds raspy. Examination of the heart and abdomen was not remarkable except for the presence of easily reducible, indirect, inguinal hernias. There was no clubbing of the fingers.

Urinalysis was within normal limits. The red blood cell count was 3.5 million, the hemoglobin 11 Gm., and white blood cell count 23,250, with 90 per cent neutrophils (including 6 per cent band forms), 8 per cent lymphocytes, 1 per cent monocytes, and 1 per cent basophils. Serologic tests for syphilis were negative. Roentgenograms of the chest made 3 weeks before entry showed a triangular lesion in the left upper lobe at the level of the third rib, communicating with the hilum; both lung fields had an emphysematous appearance. A roentgenogram of the chest made on admission demonstrated a cavity in the lesion mentioned, without any significant increase in the amount of surrounding infiltration. Several examinations of the sputum failed to reveal the presence of acid-fast bacilli. The sputum culture showed a heavy growth of *Proteus vulgaris*.

In the hospital the patient continued to have fever up to 103°F and had an occasional chill. He complained only of aching in the shoulders. On the fourth hospital day bronchoscopy was performed and was negative except for a moderate amount of purulent material exuding from the left upper lobe orifice. Post-bronchoscopic secretions were negative for tumor cells and acid-fast bacilli. The patient was started on a course of penicillin and streptomycin without any effect on the temperature curve (figure 1). On the ninth hospital day the patient began to complain of constant, severe pain in the right upper quadrant of the abdomen. Abdominal examination was difficult because of muscular rigidity. Two days later a mass could be palpated in the right upper quadrant, and there was slight tenderness to percussion with the fist over the right lower rib cage. Diaphragmatic movements were normal. There was no jaundice. The hemoglobin now was 8.7 Gm., but the white blood cell count remained virtually unchanged. Transfusions totaling 1,500 c.c. of blood were administered. By the fourteenth hospital day a very tender, firm mass could be well felt, extending 5 fingerbreadths below the right costal margin, and was thought to represent an enlarged liver. In addition, a small, firm, globular mass extended down from its lower edge. Direct and rebound abdominal tenderness was present. Cholecystograms with a double dose of Telepaque failed to show evidence of the gallbladder. Serum bilirubin was 1.2 mg. per cent, thymol turbidity 3 units, cephalin cholesterol flocculation negative in 24 hours and 1+ in 48 hours. A roentgenogram of the chest showed no essential change. On the fifteenth hospital day a laparotomy was performed. The liver was found to be involved by metastatic tumor. On biopsy it showed metastatic squamous-cell carcinoma, thought by the pathologist to be consistent with bronchogenic carcinoma. At autopsy, following death on the twenty-sixth hospital day, this impression was confirmed.

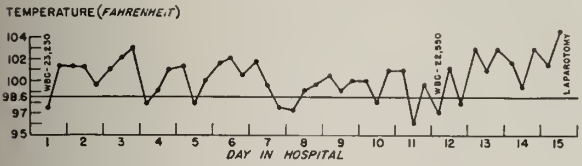

FIG. 1. Case 1. Temperature curve and white blood cell counts.

*Comment:* Unusually rapid hepatic enlargement was responsible for severe right upper abdominal pain with direct and rebound tenderness in a patient already showing sustained fever and leukocytosis. The irregular contour of the liver had clinically suggested a palpable gallbladder. Fever and leukocytosis are not uncommon findings in a case of malignant neoplasm, especially with rapid and massive invasion of the liver. The concurrent failure of visualization of the gallbladder with fever and leukocytosis too closely resembled surgical cholecystic disease. Had the clinicians fully appreciated the speed with which the liver may enlarge almost under one's hand in the presence of metastatic malignancy, with a small or even undiscovered primary lesion, and performed needle biopsy of the liver, needless surgery may have been averted.

**Case 2.** A 53-year-old white man was admitted to the hospital because of abdominal pain. Two months before entry he had developed upper abdominal discomfort and pain associated with bloating and belching. Attacks of pain, with radiation to the back, occurred daily and were not related to meals. For a number of months he had had mild cough, productive of moderate amounts of white sputum. The past history was not contributory.

Physical examination revealed a well-developed, moderately undernourished man. The temperature was 99.6°F, the pulse rate 80, and the respiratory rate 26. The blood pressure was 128 systolic and 90 diastolic. The heart and lungs were not remarkable. Examination of the abdomen was not entirely satisfactory because of muscular rigidity and tenderness in the right upper quadrant and epigastrium, with a sense of resistance in this area.

Urinalysis was within normal limits. The red blood cell count was 5.9 million, the hemoglobin 18.6 Gm., and the white blood cell count 17,850, with 81 per cent neutrophils (including 17 band forms) and 19 per cent lymphocytes. Serologic tests for syphilis were negative. A roentgenogram of the chest was not remarkable. In the hospital the patient continued to complain of abdominal pain. Tenderness and rigidity in the right upper quadrant and epigastrium were constantly present. On the fourteenth hospital day the tenderness in the right upper quadrant became particularly marked, with increase in rigidity. Additional laboratory and X-ray examination disclosed the following: serum bilirubin 0.8 mg., 10 per cent retention of bromsulphalein dye in 45 minutes (5 mg. per Kg.), cephalin cholesterol flocculation negative in 48 hours, normal gastrointestinal series, and nonfunctioning gallbladder.

In consultation with the Surgical Service exploratory laparotomy was considered for probable acute cholecystitis, but it was decided to observe the patient further. One week later it was possible to palpate a hard, very tender liver extending 3 fingerbreadths below the right costal margin; in the next week it practically doubled in size, descending 6 fingerbreadths below the costal margin and extending into the left upper quadrant. Pain, tenderness and rigidity persisted. A needle biopsy of the liver disclosed anaplastic carcinoma. Mild icterus developed, and surgery of course was no longer considered. An X-ray film of the chest now showed elevation of the right leaf of the diaphragm with increased markings in the right lower lobe. If the process in the liver had not by this time been elucidated, surgery may again have been considered for subdiaphragmatic abscess or liver abscess. The course was progressively downward, and the patient died on the thirty-fifth hospital day.

At autopsy a small mass was found in the hilar region of the left lung which proved to be an anaplastic bronchogenic carcinoma. The liver weighed 5,700 Gm. and contained numerous metastatic nodules.

*Comment:* This case had much in common with case 1. There were fever, leukocytosis, right upper abdominal pain and tenderness, and finally a rapidly enlarging liver. In both cases cholecystograms showed a nonfunctioning gallbladder. In this case, however, the reason for hepatic enlargement was appreciated in time to prevent needless surgery, and the nature of the process was proved by biopsy of the liver.

**Case 3.** A 52-year-old American Indian male was admitted to the hospital in a semi-comatose condition.

Physical examination revealed a well-developed and well-nourished man, acutely ill, obviously dehydrated, and responding only to painful stimuli. The temperature was 97°F, the pulse rate 90, and the respiratory rate 20. The blood pressure was 112 systolic and 60 diastolic. The positive physical findings were limited to the abdomen. The liver was markedly enlarged, the right lobe extending 7 fingerbreadths below the right costal margin and presenting a smooth, firm, and apparently quite tender surface; the left lobe of the liver extended 4 fingerbreadths below the xiphoid cartilage and the left costal margin, producing a bulge over the anterior abdominal wall, which was fluctuant.

Urinalysis gave a slightly positive reaction for protein, and the sediment showed the presence of white blood cells and occasional red blood cells. The red blood cell count was 3,640,000, the hemoglobin 11.7 Gm., and the white blood cell count 56,000, with 98 per cent neutrophils (including 22 per cent band forms) and 2 per cent lymphocytes.

Initially the treatment consisted of fluid replenishment with intravenous glucose in saline. Within 24 hours the temperature rose to 101.6°F and for the remainder of the course in the hospital fluctuated between 101° and 106°F (figure 2). The white blood cell count rose to 70,045, with 91 per cent neutrophils and 9 per cent lymphocytes. On the second hospital day a needle was inserted through the anterior abdominal wall into the left lobe of the liver, and 200 c.c. of viscid, reddish-brown material was aspirated. Two days later the procedure was repeated with the recovery of 100 c.c. of similar material. At the same time aspiration of the right lobe of the liver through the intercostal approach yielded approximately 1,000 c.c. of such fluid, which grossly had the color and consistency of liquefied, necrotic liver tissue characteristic of amebic liver "abscess." On microscopic examination no white blood cells were seen. Cultures were sterile. Following aspiration, 50 c.c. of emetine hydrochloride solution, 1 to 1,000, was instilled into the right lobe of the liver and 10 c.c. into the left lobe. A course of emetine by intramuscular route was also instituted. Repeated liver aspirations were performed, yielding from 80 to 500 c.c. of fluid. Additional therapy consisted of the use of penicillin, parenteral fluids and blood transfusions. The course was progressively downward and death occurred on the eleventh hospital day.

At autopsy carcinoma of the left kidney was found, engulfing the left adrenal gland. The liver weighed 3,920 Gm. and contained metastatic nodules measuring 1 to 5 cm. in diameter. In addition, there was a mass measuring 14 cm. in the anterior portion of the right lobe, and in the posterior portion of the same lobe still larger masses were found which showed softening of the central portions and contained large amounts of hemorrhagic material mixed with cheese-like fatty crumbs. Microscopic examination confirmed the diagnosis of metastatic carcinoma.

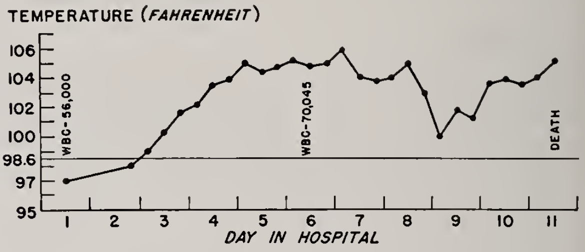

Fig. 2. Case 2. Temperature curve and white blood cell counts.

*Comment:* Fever, leukocytosis, and gross hepatomegaly with fluctuant masses containing "anchovy sauce" material certainly made a very strong case for amebic liver abscess. Disappointment was felt at the poor response to therapy, but the postmortem findings of necrotic liver metastases from carcinoma of the kidney offered the explanation. In retrospect it is not at all surprising that the aspirated fluid in this case resembled that of amebic hepatic "abscess," since it represents necrotic liver tissue produced in the absence of bacterial infection.

## Discussion

Extremely rapid liver enlargement may take place in a case of metastatic malignancy even with a small, or slowly growing primary lesion.

During the earlier stages, before the liver becomes readily palpable, there may be severe right upper quadrant pain, tenderness, muscular rigidity, and even some degree of rebound tenderness. When this is coupled with fever and leukocytosis, a not uncommon finding with rapidly growing metastatic malignant states the condition strongly suggests an inflammatory process and may lead to a thoroughly convincing but erroneous diagnosis of acute cholecystitis, empyema of the gallbladder, liver abscess or subdiaphragmatic abscess. If surgery is withheld the situation usually is clarified by the development of a hard nodular liver practically "under one's hand." Liver biopsy either early or late will frequently indicate the nature of the developing lesion of the right upper quadrant and eliminate unnecessary surgery.

## SUMMARY

Three cases of metastatic carcinoma of the liver simulating the "acute surgical abdomen" have been presented. In 1 case during the stage of development of this process, for a period lasting up to a few weeks, unnecessary laparotomy was performed. In the second, liver biopsy revealed the nature of the lesion, and in the third, aspiration of the liver produced material resembling that of an amebic liver "abscess." Procrastination or liver biopsy are both helpful in elucidating the nature of the lesion.

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# CLINICAL EVALUATION OF SKELETAL MUSCLE RELAXANT, TUBADIL, AND TOPICAL ANESTHETIC, AMERICAINE AEROSOL, IN ANORECTAL SURGERY*

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PAIN and discomfort during the postoperative course of anorectal surgery have been so widely publicized that many patients prefer to postpone essential corrective surgery and endure unnecessary suffering. Consequently a more comfortable and less painful postoperative course has long been the desideratum for patient and surgeon alike.

We have reported on our experiences with the intermittent postoperative caudal injection of an anesthetic drug through a fine indwelling polyvinyl catheter left in situ in the caudal canal following anorectal surgery.[1] Approximately 85 per cent of these patients achieve complete relief of postoperative pain. Of the remaining 15 per cent some are not suitable subjects for caudal anesthesia because of the existence of pilonidal cysts, anatomic abnormalities of the sacrum, etc. Other patients may not receive full benefits of the procedure because of technical faults or when the vinyl tube is purposefully or accidentally withdrawn. Since there is a need to provide an effective level of analgesia in this latter group of patients, we wished to have a ready means to provide them with a comfortable postoperative period. Consequently, we studied the usefulness of the long-lasting specific skeletal muscle relaxant, Tubadil, and a topical anesthetic, Americaine Aerosol, to evaluate their effectiveness in controlling and preventing the postoperative pain of anorectal surgery.

Intimate knowledge of the external anal sphincter muscle and of the nerve supply to the rectum, anorectal, perianal and perineal regions is essential to the proper understanding of pain which follows surgical trauma in this area. The rectal mucosa above the dentate line is supplied by sympathetic and parasympathetic nerves via the hypogastric plexus. This area has no somatic innervation; pain results only from severe smooth muscle contraction or acute distention. Below the dentate line there is somatic innervation through the pudendal nerve which carries both sensory and motor fibers. The pudendal nerve derived from ventral branches of the second, third and fourth sacral nerves gives off the inferior hemorrhoidal nerve. The inferior hemorrhoidal nerve crosses the ischiorectal fossa with the inferior hemorrhoidal vessels and distributes its terminal branches to the anal canal, the external anal sphincter, and the integument adjacent to the anus.[2] The pudendal nerve is the motor nerve to the external sphincter muscle of the bladder, which by voluntarily contracting concludes the act of micturition.[3] Thus it is seen how any trauma which is necessarily perpetrated even in the most delicate of surgical hands to the anal canal, to the external anal sphincter, or to the

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* This work was aided by a grant from the Office of Naval Research, United States Department of the Navy.

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perianal skin results in the sensation of pain. Furthermore, secondary to sensory nerve stimulation, reflex impulses are established via the pudendal nerve causing the external sphincters of both the anus and the bladder to go into protective but painful spasm.

Following anorectal surgery, pain results not only from trauma to sensory nerve endings in the area of somatic innervation but also from the reflex spasm of the external sphincter muscle of the anus. Discomfort to the patient is increased by the inability to void and the necessity of being catheterized because of reflex spasm of the external sphincter muscle of the bladder. Coughing, straining or any manipulation about the buttocks and anal area accentuate the existing pain and discomfort by causing greater spasm of the external anal sphincter.

In order to combat pain following surgery in the anorectal region the avenues by which pain is initiated should be dealt with pharmacophysiologically. To achieve this purpose we have employed Tubadil to provide relaxation of the external sphincter ani and Americaine Aerosol for topical anesthesia.

Tubadil is a long-acting intramuscular preparation of d-tubocurarine chloride in a specially developed menstruum which permits a slow, safe release of the muscle relaxant. Moyers[4] found that, in using Tubadil in dosages of 0.5 mg. of tubocurarine chloride per pound of body weight, plasma levels in humans rose only slightly above 1.0 mcgm. per c.c., a plasma level of 4 mcgm. per c.c. of tubocurarine chloride being consonant with respiratory paralysis. In the treatment of injuries to the musculoskeletal system characterized by painful muscle spasm, Fuller,[5] Hoback,[6] and Lipow[7] found Tubadil a safe and valuable therapeutic adjunct which decreased the need for narcotic analgesics. Lenahan[8] in a series of 61 postoperative anorectal surgery cases and Malia[9] in a series of 100 similar postoperative cases both reported a decreased need for narcotics with the use of Tubadil. Pantalone et al[10] evaluated the postoperative demand for narcotics in 117 patients receiving 1 c.c. of Tubadil every 12 hours for 5 doses starting at the conclusion of anorectal surgery. Among their results was a low postoperative demand for narcotics in the first 48 hours and a low incidence of catheterizations.

Americaine Aerosol is a 20 per cent dissolved benzocaine preparation with benzothonium chloride in a water-soluble base. It is mixed with an inert propellant which evaporates in the aerosol mist when the topical anesthetic is applied to the operative areas as a spray.

## METHOD

We have endeavored to evaluate the effectiveness of Tubadil alone and in combination with Americaine Aerosol in relieving the postoperative discomforts of anorectal surgery. This series includes 90 patients who underwent hemorrhoidectomy alone or with fistulectomy or fissurectomy. The dosage of Tubadil used for each patient was 0.5 mg. per Kg. of body weight. As simplified by Lenahan[8] the dosage in c.c. was obtained by multiplying a common factor, 0.009, by the body weight in pounds. The patients were placed randomly in 4 separate groups. The first group included 21 patients who were given a Tubadil "dummy," consisting of the menstruum without tubocurarine chloride. These patients constituted the control group. The administration schedule in this group imitated the schedule being used concomitantly for the patients receiving the true Tubadil.

The second group consisted of 21 patients who recieved Tubadil according to the following schedule: first dose, 2 hours preoperatively; second dose, 10 hours after the first dose; third dose, 24 hours after the second dose.

The third group consisted of 25 patients who received Tubadil according to the following schedule: first dose, immediately postoperatively; second dose, 12 hours after the first dose; third dose, 24 hours after the second dose.

The fourth group consisted of 23 patients who received Tubadil postoperatively according to the schedule of the third group and who were also given Americaine Aerosol.

All 4 groups were clinically evaluated according to the following points: (1) the number of injections of narcotics needed in the entire postoperative period, (2) the need for catheterization following surgery, (3) the degree of pain experienced 24 hours after surgery on coughing, straining, spreading the buttocks, and removing the drain, (4) the degree of pain experienced 48 hours after surgery on digital examination, and (5) the degree of spasm of the external anal sphincter present on the 48-hour postoperative digital examination, as indicated by the ease or difficulty with which passage through the external anal sphincter could be made.

The degree of pain and of spasm of the anal sphincter was classified as marked, moderate, slight, and none. In order to be in a better position to evaluate the closeness of gradations, we established these 4 categories and tabulated marked and moderate together as opposed to slight and none.

No patient was informed of the nature of the medication he received on being administered the Tubadil; and with the use of the "dummy" for the control group, all patients were ostensibly receiving the same medication. In order to eliminate possible bias, the postoperative examiner, whose duty it was to evaluate the degree of pain and sphincter spasm, had no knowledge of which patients had received the Tubadil and which had received the "dummy." All patients who received Tubadil plus the Americaine Aerosol were put on this regimen at the same time in order to obviate the possible impression among the patients that one was receiving something the other was not getting.

A standing postoperative order of meperidine was written for patients in all groups, but administered to the patient only on his request. Catheterization was performed only after an adequate trial showed that the patient was unable to void. A soft rubber Penrose drain was placed through the anus into the rectum of all patients at the conclusion of surgery and was removed 24 hours later. All patients were started on sitz baths 24 hours after operation, and all were aided by laxatives and enema if necessary in having a bowel movement on the third postoperative day. Only 1 patient in the entire series required narcotics after the third postoperative day. This was a highly anxious patient who required a total of 7 narcotic injections.

The results of the study are tabulated in table 1.

## DISCUSSION

When Tubadil was administered 2 hours preoperatively (group 2), there was no decrease in narcotic requirements as compared with the control group but rather an actual increase (average 2.38 and 2.14 injections, respectively). It was purely by chance that our method of random selection placed in group 2 a patient who required as many as 7 narcotic injections. Had this unusual patient not been in the second group, the final average would have been practically equal to, but no better than, the control group.

However, when Tubadil was administered at the conclusion of surgery in group 3, a drop in the average number of narcotic injections occurred (average 2.04). This improvement in response is probably related to the therapeutic advantage of the long-acting effect of Tubadil; that is, by injecting it 2 hours later as compared with group 2, we provided at least 3 additional hours of postoperative relief from painful spasm. Evidence that not all pain in the perianal region may be ascribed to sphincter spasm lies in the further reduction of narcotic injections (average 1.78 in group 4) when Americaine Aerosol was administered topically together with the Tubadil.

As compared with the control group in which 66.6 per cent required catheterization, significantly fewer patients in groups 2, 3, and 4 had to be catheterized (38 per cent in group 2, 28 per cent in group 3, 39.1 per cent in group 4). It is apparent that Tubadil relieves the spasm of the external sphincter muscle of the bladder sufficiently to obviate the need for catheterization in a higher percentage of patients. This was evident particularly in patients of group 3 who received their first dose of Tubadil immediately postoperatively.

TABLE 1

*Results of Study*

| Total No. Patients Studied: 90 | Group 1 Control Group. 21 patienls | | | | Group 2 Experimental Group: (1st dosage schedule) 21 patients | | | | Group 3 Experimental Group: (2nd dosage schedule) 25 patients | | | | Group 4 Experimental Group (2nd dosage schedule) with Americaine Aerosol: 23 patients | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average no. injections of narcotics per patient postoperatively | 2.14 | | | | 2.38 | | | | 2.04 | | | | 1.78 | | | |
| Need for catheterization | Yes, 14<br>66.6% | | No, 7<br>33.4% | | Yes, 8<br>38% | | No, 13<br>62% | | Yes, 7<br>28% | | No, 18<br>72% | | Yes, 9<br>39.1% | | No, 14<br>60% | |
| | Marked | Moderate | Slight | None | Marked | Moderate | Slight | None | Marked | Moderate | Slight | None | Marked | Moderate | Slight | None |
| Severity and incidence of pain 24 hrs. postoperatively—cough, spread buttocks, strain, removal of drain | 0 | 6 | 9 | 6 | 1 | 7 | 10 | 3 | 0 | 5 | 18 | 2 | 1 | 6 | 7 | 9 |
| | 28.5% | | 71.5% | | 38% | | 62% | | 20% | | 80% | | 30.4% | | 69.6% | |
| Severity and incidence of pain 48 hrs. postoperatively with digital examination | 5 | 6 | 9 | 1 | 5 | 8 | 8 | 0 | 7 | 6 | 11 | 1 | 8 | 5 | 7 | 3 |
| | 52.4% | | 47.6% | | 61.9% | | 38.1% | | 52% | | 48% | | 56.5% | | 43.5% | |
| Anal sphincter spasm 48 hrs. postoperatively with digital examination | 1 | 6 | 8 | 6 | 1 | 2 | 12 | 6 | 0 | 5 | 14 | 6 | 3 | 3 | 5 | 12 |
| | 33.3% | | 66.7% | | 14.3% | | 85.7% | | 20% | | 80% | | 26% | | 74.0% | |

Twenty-four hours after surgery, all patients of each group were tested by such deliberate acts and manipulations as coughing and straining by the patient and spreading of the buttocks and removal of the drain by the examiner. In the control group, 6 patients (28.5 per cent) complained of marked or moderate pain, while 8 patients (38 per cent) given Tubadil preoperatively (group 2), 5 patients (20 per cent) given Tubadil at the conclusion of surgery (group 3), and 7 patients (30.4 per cent) receiving Tubadil plus Americaine Aerosol offered the same complaint. It is evident that deliberate straining and manipulation caused pain significantly in all groups irrespective of what medication was administered.

A digital examination of the anus was made 48 hours after surgery in all patients. The control group manifested marked or moderate pain in 52.4 per cent, and marked or moderate sphincter spasm in 33.3 per cent of patients. Group 2 had marked or moderate pain in 61.9 per cent, and marked or moderate sphincter spasm in 14.3 per cent of patients. Group 3 exhibited marked or moderate pain in 52 per cent, and marked or moderate sphincter spasm in 20 per cent of patients. Group 4 showed marked or moderate pain in 56.6 per cent, and marked or moderate sphincter spasm in 26 per cent of patients. Review of these data permits the conclusion that Tubadil alone significantly reduced the amount of spasm of the external anal sphincter, and again demonstrates that deliberate manipulation caused a significant amount of pain in all groups.

No side-effects, with the rare exception of mild and transitory diplopia attributed to Tubadil, were observed in any of the patients receiving the Tubadil and/or Americaine Aerosol.

## SUMMARY

Our previously reported method of providing adequate analgesia to postanorectal surgery patients by means of intermittent injections of tetracaine hydrochloride through a polyethylene tube left in situ in the caudal canal is satisfactory in 85 per cent of patients. Since this method cannot be extended to the other 15 per cent of patients for the reasons given above, the use of other agents to provide relief of pain in this group is considered in this study.

Ninety patients undergoing various types of anorectal surgery were studied with the use of the long-acting skeletal muscle relaxant, Tubadil, and the topical anesthetic, Americaine Aerosol, with particular reference to the relief of postoperative pain and spasm as indicated by their narcotic analgesic requirements, the need for urinary bladder catheterization, and the incidence of pain and spasm following such deliberate insults as coughing and straining by the patients, spreading of the buttocks, removal of anal canal drain, and digital examination.

Our experience with Tubadil demonstrates that Tubadil given following surgery decreases the demand for narcotic analgesics postoperatively by decreasing the spasm of the external sphincter ani. When Americaine Aerosol is added to the regimen the need for narcotic analgesics is further decreased. Deliberate manipulation of the operative area caused a significant amount of pain irrespective of the medication used. Tubadil alone significantly reduces the need for postoperative catheterization, probably by obtunding reflex spasm of the external sphincter muscle of the bladder. No serious side-effects attributable to either Tubadil or Americaine Aerosol were encountered.

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# CHRONIC HEADACHE

## An Analysis of 1,254 Cases Observed for More than Six Months with Suggestions Regarding Their Diagnosis and Treatment*

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DESPITE CONTINUED research and investigation in the field of headache, no single problem poses more of a challenge than does that of headache. Much has been learned regarding the mechanism of head pain, and there has been a steady improvement in the medication available for the symptomatic management of the individual at the time of his headache. In spite of these accomplishments little has been done to reduce the tremendous incidence of this condition. It has been estimated more than 15 million individuals require treatment for headaches each year.[1] At least four times that number suffer from headaches but do not seek medical attention either through ignorance or because of failures in the treatment of their friends or relatives similarly afflicted. In certain industries headaches rank second only to respiratory diseases as the leading cause of absenteeism. Clearly, then, an intensive program of prevention is required.

No such program can hope to achieve any significant degree of success without a clear understanding of the basic types of headaches and the measures available for symptomatic and prophylactic treatment. As will become evident from the statistics presented herein, the largest number of headache patients do not suffer from a specific somatic disorder but rather from a combination of psychosomatic dysfunctions, the cumulative effect of which is a series of repeated attacks of headaches. It is the purpose of this presentation to indicate the clinical types of headaches and the methods available for their detection and treatment.

The reader is referred to the excellent basic physiologic investigation of Wolff[2] regarding the mechanism of pain in the head, the means by which pain-sensitive structures in the head were identified as well as some of the fundamentals in the pharmacologic actions of the various medications of value in treatment.

This study represents an analysis of 1,254 patients referred to the Headache Clinic or in private consultations for diagnosis and treatment of chronic headaches (table 1). These patients have been observed for a minimum of 6 months, many for as long as 10 years. The diagnosis has been confirmed by careful history-taking, physical examination, required laboratory tests and repeated observation, as well as response to treatment. The figures are undoubtedly weighted by previous medical attention, and these patients represent only the most severe or persistent form of this affliction. The casual peruser of these figures may find himself at variance with these statistics, and experience might dictate that such a distribution is not within his practice. To give an example, included in this series are 61 cases of histamine headache. It has often been said that the average general practitioner of medicine might not see more than 1 such case in his lifetime; however, the intensity of the pain and refractoriness to ordinary therapy would indicate that almost all such patients in our geographic locale have been referred to our clinic for therapy. Accordingly, almost 5 per cent of our series consists of patients with histamine headaches.

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Patients observed for less than 6 months are not included in this series, nor are patients with mild non-recurring headaches, nor patients whose headaches occur secondary to febrile disorders. Since all patients have had previous neurologic examinations, incidence of patients with chronic headache due to space-occupying lesions is considerably lower than anticipated. Excluded also from this series are patients with multiple primary complaints only 1 of which was headache. Accordingly, many individuals with hypertension, anxiety neuroses, and chronic depressive states are not included.

TABLE 1

*Types of Chronic Headache in Our Series of 1,254 Headache Patients*

| | No. Patients | Per cent |
|---|---|---|
| I. Vascular headache | | |
| 1. Histamine | 61 | 4.8 |
| 2. Migraine | 465 | 37.0 |
| 3. Hypertensive | 16 | 1.2 |
| 4. Temporal arteritis | 1 | |
| II. Tension headache | 540 | 43.6 |
| III. Nonvascular headache | | |
| 1. Muscle tension | 12 | 1.0 |
| 2. Major psychiatric abnormalities | | |
| Conversion reaction | 5 | .4 |
| Psychoses | 32 | 2.4 |
| 3. Secondary to diseases of eyes, sinuses or teeth | 72 | 5.7 |
| 4. Occipital and facial neuralgias | 18 | 1.4 |
| 5. Space-occupying lesions | | |
| Primary brain tumor | 2 | .15 |
| Metastatic brain tumor | 2 | .15 |
| Syringobulbia | 1 | .05 |
| Aneurysm of the major branches of the internal carotid artery | 2 | .15 |
| 6. Post-traumatic | 25 | 2.0 |
| | 1,254 | 100.0 |

As will become evident, division of vascular and nonvascular headaches is based on the distribution of the pain, its location, intensity and response to medication. Typical vascular headaches are described as throbbing, pulsating, pounding, beating or drumming. Their location is usually over major blood vessels, such as temporal, supra-orbital, etc. The pain may be unilateral, as in most cases of migraine, histamine headache and temporal arteritis, or bilateral, as in hypertensive headaches and occasional migraine headaches. The response of migraine to vasoconstrictive therapy such as parenteral Gynergen is so specific as to be included in the major diagnostic considerations.

## VASCULAR HEADACHE

*Histamine headache.* This condition may be diagnosed with the use of the following criteria: severe unilateral throbbing head pain in middle-aged individuals, males much more frequently than females. These headaches frequently occur at night, persisting from 15 to 120 minutes, and are associated with redness and tearing of the homolateral eye plus rhinorrhea and sweating of the same side. A family history, premonitory symptoms, and associated gastrointestinal disturbances are significantly absent. An injection of histamine may precipitate a headache. Characteristically, this condition occurs in the untreated patient for periods varying anywhere from 2 weeks to 4 months and may subside spontaneously without treatment. Synonyms for this condition are histaminic cephalalgia, Horton's headache, and cluster headache.

The drugs of choice in treatment of this headache are vasoconstrictors, best administered parenterally because of the short duration of the headaches. Dihydroergotamine (D.H.E. 45), 1 c.c., intravenously, or subcutaneously administered adrenalin, 0.3 c.c. of 1:100 aqueous solution, are frequently helpful. In patients in whom the headache is of a longer duration vasoconstrictors such as Cafergot or Cafergot P-B by mouth or rectally are of benefit. Each patient should be given a trial of antihistaminics inasmuch as milder cases respond to this treatment. In addition, the patient should be instructed to remain erect in a cool room and immerse his hands and feet in cold water.

Prophylactic measures available include a maintenance dose of antihistaminics, and for more refractory patients, intravenous histamine and/or subcutaneous histamine, as described by Horton.[3] It is well to remember that the condition may run a limited although unpredictable course.

TABLE 2

*Ergot Therapy for Vascular Headaches and the Vascular Component of Tension Headache in Suggested Order of Effectiveness*

| Medication | Method of Administration | Initial Dose | Subsequent Dose |
|---|---|---|---|
| (Administered by physician) | | | |
| D.H.E.-45 | Intravenous | 1 c.c. = 1 mg. | Not needed |
| Gynergen | Intramuscular | 0.5 c.c. = 0.25 mg. | Not needed |
| D.H.E.-45 | Subcutaneous | 1 c.c. | 1 c.c. in 1 hour? |
| (Administered by patient) | | | |
| Cafergot P-B Suppositories | Rectal | 1 suppository | 1 suppository in 1 hour seldom needed |
| Cafergot Suppositories | Rectal | 1 suppository | 1 suppository in 1 hour as needed |
| Cafergot P-B Tablets | Oral | 2 tablets | 1 every half hour until relief, or total of 6 |
| Cafergot Tablets | Oral | 2 tablets | 1 every half hour until relief, or total of 6 |

*Migraine headache.* For the diagnosis of migraine usually 4 of the following major symptoms are present. Visual phenomena or other neurologic symptoms such as paresthesia and numbness, referred to as the aura, precede the onset of pain by 15 to 30 minutes. Thereafter there is a unilateral throbbing headache lasting hours or days. This is associated with nausea and vomiting in a large percentage of cases. There is frequent familial occurrence suggesting hereditary or environmental factors. There is often an association with menses, menarche and menopause. There is a tendency for migraine headaches to occur in perfectionistic, sensitive and indecisive personality types. More than 85 per cent of the patients obtain relief from head pain with 0.5 to 1.0 c.c. of parenteral Gynergen (0.5 mg. per c.c.). Gynergen test injections are therefore useful for the correct diagnosis. Less commonly seen are a suspected relationship to epilepsy, allergy and Meniere's disease. Needless to say, no underlying physical basis for the headache is demonstrated.

Dihydroergotamine,[4] Gynergen, Cafergot and Cafergot P-B are specific for migraine. The mechanism of action relates to its specific effect as a vasoconstrictor on the branches of the external carotid artery. Table 2 gives the average dosage and method of administration.

Other medications available for the treatment of the acute headache have had varied success but are worth using in those patients not responding to ergot therapy or in the few associated conditions in which ergot is contraindicated (pregnancy, coronary heart disease, obliterative vascular disease). These include Octin, antihistamine substances, Dramamine, nicotinic acid, and inhalation of 100 per cent oxygen. General measures advisable to use during the acute headache are quiet and rest in a semirecumbent position in a darkened room with cold compresses and pressure applied tightly against the temple.

Prophylactic treatment consists principally of psychotherapy. This should be administered on the level of the general practitioner or internist unless additional serious emotional disturbances are present. Correction of endocrine factors such as relate to menstruation, menopause, pregnancy and elimination of offending foods or other allergic factors may be helpful. The use of histamine subcutaneously, as outlined in table 3, may be useful in selected patients with this type of headache.

*Hypertensive headache.* Headache is one of the most common symptoms in symptomatic hypertension. The mechanism consists of dilatation of external carotid arteries and their branches. Pain characteristically is bilateral, dull, throbbing, located most frequently in the nuchal and temporal areas. These headaches are most troublesome in the morning upon awakening and improve after the patient moves about. Nausea and vomiting occur less frequently than in migraine. The frequency and severity of headaches do not relate day by day to the specific level of blood pressure.

TABLE 3

*Subcutaneous Administration of Histamine*

| Day | Dose in c.c. A.M. and P.M. |
|---|---|
| 1 | 0.25 |
| 2 | 0.30 |
| 3 | 0.35 |
| 4 | 0.40 |
| 5 | 0.45 |
| 6 | 0.50 |
| 7 | 0.55 |
| 8 | 0.60 |
| 9 | 0.65 |
| 10 | 0.70 |
| 11 | 0.75 |
| 12 | 0.80 |
| 13 | 0.85 |
| 14 | 0.90 |
| 15 | 0.95 |
| 16 | 1.0 |

The more serious episodes of headache may be controlled with Cafergot, but prolonged use is not recommended in this condition. General measures for the care of hypertensive patients should be followed. In addition, it is helpful to have the patient use a low-salt diet. He should keep his bowels well regulated to avoid straining at stool and sleep with the head of the bed elevated 8 to 10 inches above the level of the foot of the bed. The latter serves to prevent congestion and pooling of blood that occur by the action of gravity in the head-down position. Many cases are well controlled by the proper use of potassium thiocyanate according to the method of Hines and Eaton.[5] Maintenance of blood levels between 8 and 12 mg. per 100 ml. of blood often relieves the headache even if the blood pressure is not lowered appreciably. Chemotherapy with the use of ganglionic blocking agents or drugs that decrease peripheral resistance or increase renal blood flow, as well as sedatives, are indicated. When headaches are resistant to the usual methods employed in the treatment of hypertension, histamine is at times helpful (table 3). Surgical intervention, namely lumbodorsal sympathectomy, is indicated in only the most resistant cases.

*Temporal arteritis.* This is an extremely rare condition observed exclusively in older age groups in which headache is one manifestation of an obvious systemic disorder. The associated symptoms include fever, weakness, anorexia, weight loss, anemia and leukocytosis. Diagnosis is based on the presence of painful tender nodules of the scalp along the course of temporal arteries. There is a high incidence of retinal artery involvement with partial to complete blindness. The treatment consists of resection of the segment of the involved artery. Recent reports of response to adrenal steroids are difficult to confirm because of the small number of patients but do seem to have promise.

## TENSION HEADACHE

The sustained dull pain is usually most intense in the neck, shoulders or occiput and may spread to the frontal region unilaterally or bilaterally. Hereditary factors are not present, nor are symptoms of aura, nausea, vomiting, and the throbbing recurrent head pain seen in migraine.

In the evaluation of the tension headache it is necessary that an intensive inquiry be made into the total variety of factors which may be responsible for the emotional state. Some of these are occupational, financial, domestic, sexual, social, physical, allergic or endocrine.

These emotional factors may be caused by nervous tension with muscle spasm and lowered threshold of pain, which results in headache.

Nervous tension, however, can play an important role in other forms of headache, such as the recurrent throbbing head pain or non-nonvascular muscle tension headache.

We have found the most effective therapy in tension headache to be sedation and analgesia or a combination such as Fiorinal (table 4). When a vascular component is evident vasoconstrictors of the ergot group are most helpful (table 2). In certain individuals physical therapy consisting of heat and massage to the affected area has been helpful. Vasodilator substances, nicotinic acid and antihistaminics have helped in special instances.

TABLE 4

*Analgesic Therapy for Nonvascular Headaches*

| Medication | Method of Administration | Initial Dose | Subsequent Dose |
|---|---|---|---|
| | | *tablets* | *tablets* |
| Analgesic + caffeine + sedative (Fiorinal) | Orally | 1–2 | 1–2 in 4 hours if needed |
| Analgesic + caffeine (APC and/or aspirin compound) | Orally | 1–2 | 1–2 in 4 hours if needed |
| Analgesic (aspirin) | Orally | 1–2 | 1–2 in 4 hours if needed |

It must be emphasized to the patient that tension created by physical, nervous or emotional stress plays a definite role in the production of his headaches. Further, he must be aware that everyone has a limit to which his system can be strained during a given period of time. Thus, psychotherapy plays an important part in the prevention of headache.

Headache is to be interpreted as one of the most common symptoms the body uses to warn the patient that his limits have been exceeded. Tension can be created primarily by a particular physical or mental stress or more often by an accumulation of several different factors acting at the same time. The patient must learn to recognize how the various stresses of his daily life cause tension to mount to the breaking point. He must learn to conserve himself so that the summation of these stresses does not exceed his limits. In patients in whom premenstrual tension is a significant part of the tension syndrome, it is helpful to control fluid retention during the premenstrual phase through the use of sodium restriction, acid-forming salts and diuretics. Hormone balance may be corrected either by suppression of ovulation with testosterone or estrogen or premenstrual progesterone administration. Judicious use of sedation is helpful.

## NONVASCULAR HEADACHE

*Muscle tension headache.* The characteristic complaint is pain usually restricted to the back of the neck with radiation down to the shoulder area. On physical examination it may be possible to palpate tender nodular areas in the painful region. Symptomatic relief is often obtained by anesthetizing these tender points with procaine. They likewise respond to the use of physical therapy such as heat and massage and, when indicated, neck traction. Analgesics (Fiorinal) and vasodilators are helpful in overcoming the spasm of the muscles responsible for the pain. The factors responsible for the production of this type of headache should be emphasized to the patient, and accordingly he should be advised to avoid drafts of cold air, local trauma, etc.

*Conversion reaction.* This type of headache is included in this outline because of its unique character. Ordinarily no specific type of pain is present, but frequently the individual complains of lightning-like thrusts of pain coming in one or the other part of the head, never localized to a specific artery or muscle. Most frequently these pains are of a fleeting although severe character. These patients respond poorly to therapy. If anything, sedatives or analgesics (Fiorinal) and physical therapy are indicated. These patients may respond to psychotherapy and to muscle-relaxing drugs.

The remaining types of headaches may be mentioned only in passing, since the recognition and treatment of these patients are dependent upon the specific causes and factors involved. A small percentage of the total may be due to diseases of the eyes, ears, nose, throat, sinuses and teeth. Some may be related to occipital and facial neuralgias primary or secondary to cervical arthritis. The post-traumatic syndrome is accordingly included in this nonvascular category, as are space-occupying lesions.

### METHOD OF ADMINISTERING HISTAMINE

*Intravenous route.* The solution is prepared by dissolving 2.75 mg. histamine diphosphate (= 1 mg. of histamine base) in 500 c.c. of normal saline or 5 per cent glucose in water. Treatment is given by intravenous drip daily for approximately 1 hour at a speed just fast enough to produce a mild flushed sensation about the head without causing uncomfortable side-effects. Initially, 8 to 12 drops per minute are well tolerated. After the first 4 days of treatment the infusions are given 3 times per week until definite improvement takes place. In successful cases this occurs at about the third or fourth week of treatment. At this stage subcutaneous administration of histamine as described in table 3 is started and the intravenous therapy discontinued. Future relapses may be prevented in many cases by having the patient continue the subcutaneous histamine.

*Subcutaneous route.* The solution used contains 0.275 mg. histamine diphosphate. The injections are given subcutaneously by the patient, friend or family. These injections are given twice a day, after breakfast and at bedtime (table 3).

The dose is reduced by 50 per cent if uncomfortable flushing or headache is precipitated. The maximum tolerated dose is continued twice a day until the desired results are achieved. Thereafter the injections are gradually reduced in frequency to once a day 2 or 3 times a week and then discontinued at the physician's discretion.

### SUMMARY AND CONCLUSIONS

Descriptions of the common types of chronic recurrent headaches have been given and suggestions for specific therapy for acute attacks of headache in its various forms outlined. Therapeutic regimens and psychotherapy required for prophylaxis of attacks form the mainstay in handling these patients. Once the headache occurs, it means that the patient has failed in his attempts to "live within his physical and emotional budget." It is as if the horse gets out of the barn and we have to chase him and track him down.

Let us all look to our fence-mending, learn the limits of our systems, and learn to live within them. It is only thus that the tremendous incidence of chronic headache can be reduced.

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# THROMBOSIS OF AN AORTIC HOMOGRAFT TWENTY-SEVEN MONTHS AFTER ITS INSERTION

## Report of a Case

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OPERATIVE TREATMENT for Leriche syndrome is described in the following case.

A 42-year-old white male horse trainer with complaints of cramping pains in his calves on walking, of 2 years' duration, was first seen in September, 1953. He had been well until 2 years prior to admission, at which time these pains developed insidiously. They were worse in the right leg, but were also present in the left leg. The pains were alleviated by sitting or stopping to rest. The progression of these pains prompted his request for medical aid.

He had had previous operations for a ruptured duodenal ulcer and later a subtotal gastrectomy. In June of 1953 a bilateral sympathectomy had been performed because of these same cramping calf pains. Following the sympathectomy the night pains, cramps, and claudication disappeared. However, in the 2 months prior to this admission the pains returned with greater severity.

Pertinent examinations revealed that his legs were thin but in keeping with his habitus. Their color was apparently normal. On elevation the right leg blanched; on dependency no duskiness or cyanosis could be noted. With point pressure on the left leg the skin blanched, and on release the normal hue slowly returned. In the right leg this normal hue returned much more quickly than in the left. The left femoral, posterior tibial and dorsalis pedis arteries were felt to pulsate. The femoral pulse on the right was barely palpable, and no posterior tibial or dorsalis pedis pulsations could be discerned. The aortic pulsations felt normal down to the level of the umbilicus. There was a chronic-appearing crusted lesion on the anterior surface of the right lower leg. An aortogram was performed on August 28, 1953, which showed obstruction of the right common iliac artery.

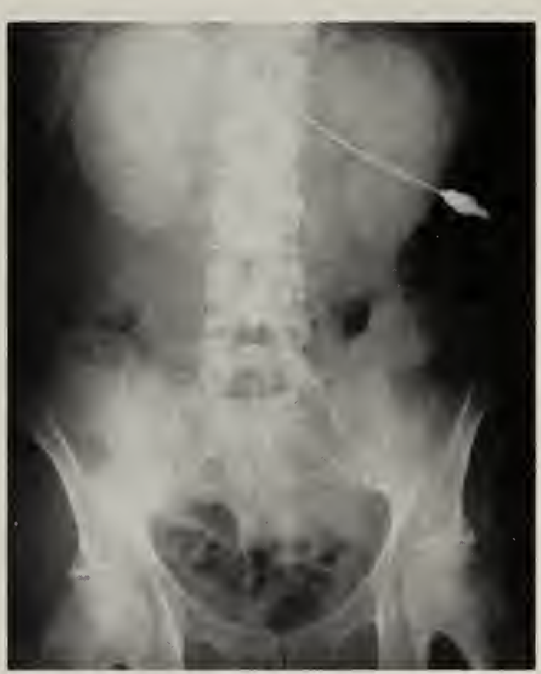

FIG. 1. Aortogram showing occlusion of right common iliac artery.

Operation was performed on September 2, 1953, at which the aortic bifurcation and iliac arteries were resected and examined. No blood could be aspirated from the right femoral artery. No pulsations could be felt in the right common iliac, but excellent pulsations could be seen and felt in the aorta and left common iliac. Palpation of the right common iliac artery revealed an area of soft, empty, apparently normal artery.

Accordingly, after controls had been placed about the aorta and iliac arteries and heparin had been injected distally, the right common iliac artery was incised longitudinally. The lumen was completely occluded by thickened intima, old thromboses and other grumous material. These were removed by intimectomy, leaving a fairly healthy media and adventitia. It was necessary to extend the incision up into the aorta where the process was repeated. Gradual release of the clamps showed a good blood flow from both vessels, and the vessel wall was repaired. Postoperatively both femoral arteries were palpable, and the legs were warm. However, within the second week after the thrombo-endarterectomy it became obvious that the right iliac artery had again become occluded. This was confirmed by oscillometry and aortography. After a short leave of absence the patient was readmitted to the hospital, by which time a suitable graft had been obtained. A second operation was performed, and a short segment of aorta and long segments of both iliacs were resected down to the femoral arteries.

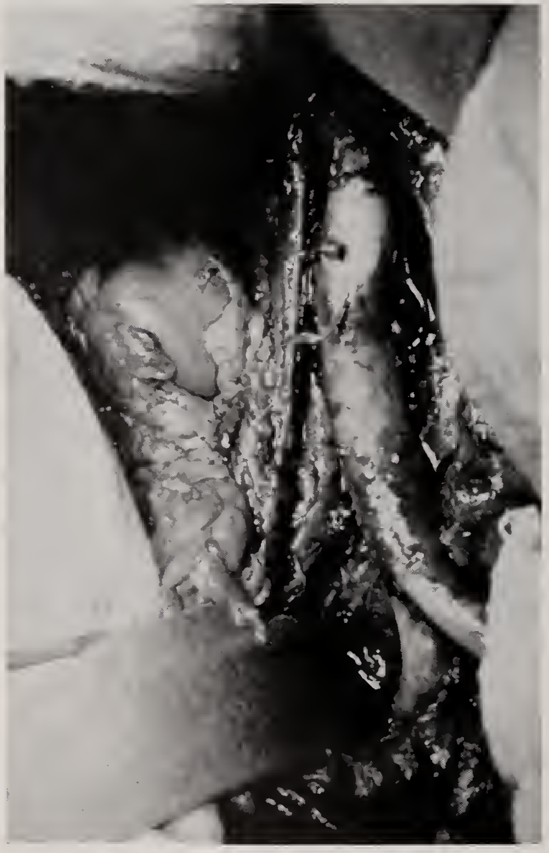

Fig. 2. Photograph taken at operating table showing homograft after its anastomosis and after release of clamps.

A freeze-dry homologous graft was then interposed with anastomoses intra-abdominally and in Hunter's canal (figure 2). Following release of clamps a good flow with satisfactory pulsations was obtained in both extremities. The subsequent aortogram showed a well-functioning graft, and after an uncomplicated postoperative course he was discharged (figure 3).

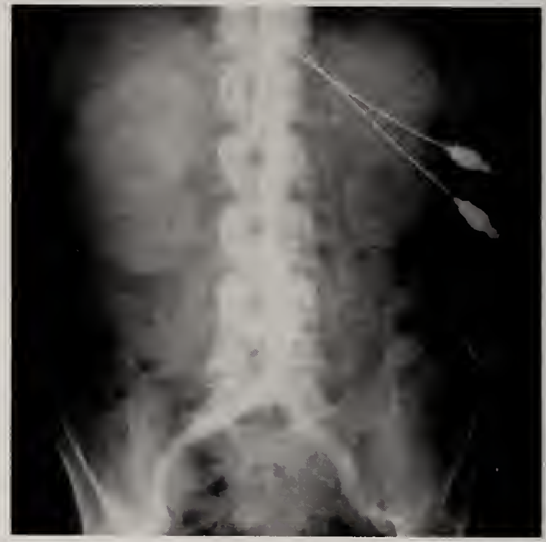

Fig. 3. Aortogram after insertion of homograft. Note that hypogastrics have not been anastomosed to graft.

In May of 1954 the patient was readmitted with jaundice which was diagnosed as homologous serum jaundice. During his convalescence from this condition he suddenly developed an acute occlusion of the left femoral artery. He was immediately taken to the operating room for an exploratory operation. No blood was present in the femoral artery. It was opened and a fine ureteral catheter was inserted; and with gentle irrigation and aspiration several clots were flushed out, when a forceful jet of blood followed. After no further clots could be obtained the artery was repaired. After another satisfactory convalescence the patient was again discharged.

Periodic checkups indicated a continuing good result. This was confirmed by an interval aortogram.

On January 22, 1957 the patient telephoned from a racetrack near Miami, Florida to state that he had had another arterial occlusion on the opposite side and was returning. After a preliminary examination he was again admitted to the VA Center for removal of the clot. The right leg was cold and blanched below the knee. The right femoral pulse was absent. He stated that he had been seized by a sudden sharp pain followed by cramping pains, burning, and coldness of the leg.

Exploration of the right femoral artery revealed arteriosclerotic thickening and plaques at the bifurcation of the femorals. The artery was opened above this area, and a small soft clot was easily removed. However, no

(*Continued on page 622*)

# President's Page

## REHABILITATION

Not many years ago, within the memory of many of you in the Society, when we saw a paraplegic we looked at his legs and said, "This man is paralyzed; there is nothing we can do." Now, when we see a paraplegic we look at the individual, examine his arms, evaluate his aptitudes, and say, "This man can be restored to a useful place in society." Attention has shifted from what the patient has lost to what he has left. This change in attitude is the most significant factor in medical rehabilitation.

Restoration or rehabilitation in its modern concept probably started in Belgium in the early part of the century. A school of vocational training was established for individuals who were so disabled they could not be admitted to apprenticeships. It is apparent, then, that improvement in individual earning power has been important from the very beginning. Medical rehabilitation, once begun, spread like a chain reaction. It is applicable to so many diseases and injuries, it involves so many specialists and assistants, that teamwork is essential. Too often physicians are inclined to think only of their own services and have shown a reluctance to recognize the valuable contributions other disciplines can make.

The breadth of the problem was impressed upon me last year when I participated in a meeting sponsored by the American Federation of the Physically Handicapped. Active interest in the work of rehabilitation was demonstrated not only by representatives of the medical profession but also by civic organizations, management, labor and Government. In the Metropolitan Area of the District of Columbia alone, there are some 140 agencies or facilities having an interest in restoration of the handicapped. Each of these organizations is rendering a service of value. Some have facilities and personnel to give a broad coverage; others are rendering a specific service though an indispensable one. Many of these organizations are working independently and without adequate knowledge of what service the other is giving.

The handicapped person looks to the medical profession for treatment to restore him to a status of working ability or self-help. Realizing the thread of medicine interwoven in the tapestry of rehabilitation, Dr. P. A. McLendon, while President of the Medical Society, recognized the opportunity for the Society to serve the community. This eventually resulted in the formation and establishment of the Society's Council on Rehabilitation, on which all medical societies in the Washington Metropolitan Area are represented.

Other communities have made studies of their rehabilitation services but ours is the first community study sponsored by a medical society. Funds for this study were made available through the Office of Vocational Rehabilitation of the Department of Health, Education, and Welfare. We can take pride in this pioneer demonstration carried out under medical sponsorship. It is hoped and expected that this study will result in a more balanced, integrated program in which all disciplines will work together toward the establishment of continuity of total care for the handicapped.

James W. Watts

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OF THE DISTRICT OF COLUMBIA

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# Editorials

## MAN AND MACHINE

Except for the legendary Texan, few of us would care to discard an automobile because of threadbare tires or any other worn part, however essential to the operation of the whole. Biologic engineering as well as its mechanical counterpart has shared in this desire for salvage and preservation of the organism. Medical science has long emphasized the particular wastage in death or suffering due to acute reversible processes or the isolated loss of theoretically replaceable organs.

The search for organ replacement probably began inauspiciously with the attempt in the 17th century to transufse Pope Innocent VIII with animal blood. But with no more than the usual backing and filling, the science of human engineering has written a fascinating record of rapid and varied accomplishment. Replacement of many liquid organs is now a commonplace fact of clinical practice. Whole blood, plasma, albumin, specific protein fractions, synthetic plasma expanders, extracellular fluid and electrolyte replacement solutions are now taken for granted with sometimes too cursory a nod to the research and development that made them possible. So, too, we have incorporated external organ replacement into our daily living and practice. This has ranged from the purely cosmetic toupee to the more functional items, such as dentures, limb prostheses, the artificial larynx and metal hip sockets.

Through the decades that have brought these accomplishments, the science of internal organ replacement or substitution has remained a vast, critically important, but largely undeveloped medical frontier. The problems, of course, are infinitely more complex. Such a project in this field demands the ability to analyze and define all the physiologic variables in the functions of a human organ, the imagination to design an imitative or substitutive device, the acquisition of unique materials and engineering skill to build it, the surgical technic to install it, and the clinical investigative acumen to choose the proper subject, manage the complications, and critically evaluate the results. Success, when it has come, has been due to a remarkable combination of physiology, engineering, surgery and clinical medicine.

The critical need for education and communication in this fast-moving area was underscored by the formation of the American Society for Artificial Internal Organs, which had its first meeting in June, 1955. A quick glance over the transactions of its three national meetings will provide a startling glimpse of the future. Some titles include extracorporeal hemodialysis (the artificial kidney), pump-oxygenators (the heart-lung bypass), the capacity of resins to simulate renal tubular processes, transplantation of the mitral valve, synthetic blood-vessel grafts, diffusion across plastic films, artificial heart valves, and ion selectors. Advanced theoretical discussions have involved implantable kidneys, hydraulically-operated, implantable pumps to replace the heart, and even an artificial uterus.

Solid clinical achievement has already been scored by the artificial kidney in the treatment of acute renal insufficiency and dialyzable poisons, vascular grafts in replacing acute occlusions and localized narrowing of blood vessels, pump-oxygenators in permitting open heart surgery, and blood pumps in supporting the circulation during myocardial infarction.

The emergence of this new field has naturally brought with it a host of new problems for the patient, the practitioner, the teacher, the hospital administrator, and the insurance and medical service agencies. Not the least of these has been the inertia in listing new procedures in fee schedules and the difficulties in placing these procedures into the conventional pigeonholes on the rapidly antiquated insurance and service agency forms. The Washington Blue Shield is to be congratulated in being one of the first to recognize hemodialysis as a clinical procedure, but the national experience of clinicians in this field has been very discomforting. It is doubtful that any fixed-fee schedule will be able to keep up with the rapid development in the organ replacement field, and recent experiments in Wisconsin, dispensing with fixed fees, offer much greater hope of flexibility.

The recent introduction of a disposable artificial kidney by Travenol Laboratories represents the first major commercial development in this field. It is now financially possible for almost anyone to buy an artificial kidney, and over 50 units have been shipped to hospitals across the land. Such apparatus, however well designed and executed, is, of course, only as good as the physician who sets it up, the laboratory that directly supports it, and the clinician who chooses the proper cases for it, manages the patient through dialysis, and who can cope with the complexities of medical renal disease in the long and critical days between dialyses. Success will likewise depend on the caliber of consultations available to contend with the hematologic, metabolic, infectious, urologic, psychiatric, anesthetic, and other problems which regularly beset such patients.

It is understandable that hospital administrators and trustees, raised in the traditional American fascination with mechanical marvels, should want such machines in their hospitals. But there have been distressing instances of administrators callously referring to such scientific developments as "prestige items," purchasing or accepting donations for such machines without prior inquiry or any real thought to the development of necessary laboratory facilities or the procurement of a trained professional team to ensure their proper operation. Like the boy who looked wistfully at a Jaguar before learning to pedal a bicycle, such administrators, it is hoped, will exercise forbearance. Not only human lives but a new clinical science may be stifled by their lack of prudence.

George E. Schreiner, M.D.
*Secretary-Treasurer,*
*Americal Society for Artificial*
*Internal Organs*

## A WORD OF CAUTION

The present trend of society is such that increased responsibility is relegated to the physician. There exist now many organizations which provide remuneration to their members for loss of time from work during illnesses or accidents. In these instances the physician is frequently the sole judge and has the sole responsibility to certify to the existence of such conditions that may be compensable. Often he is the object of a drive by the beneficiary or beneficiaries on eligibility for such funds. I am sure that almost every physician has been requested to sign sick blanks when he has not hitherto examined the patient or been aware of any illness. Frequently the patient will become exceedingly angry under these conditions because the physician will not sign the blank. He will frequently say, "All you have to do, Doctor, is to write your name and I will get my money." He refuses to perceive the moral or legal issues involved. Often he will not accept any explanation graciously. If the physician should get the reputation of being liberal with the signing of sick blanks, he will be bombarded from all sides.

The older physicians have learned from experience, because they have had a chance to respond to the situations as they have been created. The younger physicians, however, have had no such opportunity. Furthermore, during his long training he has been taught to be kind and to use his knowledge to disseminate sympathy. He may not be at all prepared to encounter successfully the various economical perplexities into which willingly or unwillingly he must fit.

One of the greatest difficulties has always been the necessity of his judgment to settle various litigations. The physician and the attorney do not occupy the same status at all. The attorney must represent one side of the battle; he is sworn to defend his client or to represent the interest of his client. This defense and this interest are expressed almost invariably in terms of finance. Therefore, if the young physician should attempt to coöperate with the attorney, he may find himself trapped in an emotional combat rather than retaining his position of impartial dignity to state facts. Rather the physician must coöperate with the court and not with an attorney. The attorney must always be partial.

Ever-increasing stress and strain is being placed upon the physician. He must, therefore, not only be prepared scientifically, but he must also be prepared morally to discharge his responsibility. In order to do this a physician simply has to be a good citizen and to be cognizant of sociologic problems. Furthermore, he must know how to handle himself at all times when he finds himself among legal contestants. Otherwise, if the young physician entering private practice has neglected this part of his training, he may find his career curtailed or even destroyed during the process of learning by trial and error.

O. Hugh Fulcher, M.D.

# IS EARLY DETECTION OF DIABETES REALLY NECESSARY?

We believe that it is.

What is gained by establishing the diagnosis of diabetes mellitus even when symptoms may be mild or absent? The answers may be briefly stated as follows. First, it is at this early stage that excellent control may be achieved by diet alone. Obese diabetics in particular can be returned completely to normal by proper weight reduction. In the non-obese mild diabetic there is evidence to support the belief that restriction of carbohydrate intake to the limits of the patient's own capacity to produce insulin reduces the "strain" on the islets of Langerhans and may inhibit the rate of further deterioration.

Second, the awareness of the presence of diabetes alerts the physician and patient to the possibility of acute exacerbations which may occur in association with surgery, pregnancy, infections or trauma, when prompt treatment with insulin may prevent acidosis or coma.

Third, isolated symptoms, such as chronic fatigue, weight loss, resistant infections or pruritus, which are otherwise difficult to explain or control, will disappear if diabetes is found and treated.

Fourth, we now have a drug which is given orally and, when dietary restriction alone is not sufficiently effective, will control diabetes adequately in 60 to 70 per cent of adult patients without the use of insulin. This drug is sulfanylurea, and is available commercially under the trade name of Orinase. Extensive clinical trials have demonstrated that this drug produces very little, if any, toxicity or side-effects. Although the precise mode of action is not yet clearly understood, the discovery of the hypoglycemic action of this compound has stimulated a great amount of research, and it is very likely that others will be found which will be even more effective.

These answers to the question presented above form the keystone of the philosophy behind the annual Diabetes Detection Drive, which will be conducted this year during the week of November 17–23 by the Diabetes Association of the District of Columbia, as well as on a Nation-wide basis, under the sponsorship of the American Diabetes Association.

What can the physicians in Washington do to coöperate in this Drive?

Test every patient who comes into your office for sugar in the urine.

Lend your moral support by encouraging everyone else to be tested by the Diabetes Association.

Remember: One of every 80 individuals has diabetes, without being aware of it.

Louis K. Alpert, M.D.
*Secretary-Treasurer,*
*Diabetes Association of*
*the District of Columbia*

# In and Out of Focus

BY THE OBSERVER

### *Another Lesson Learned?*

By the time these lines appear, chances are that the feared Asian influenza epidemic will have occurred or passed us by. If the worst has happened, the community will be so immersed in medical care problems it will have little opportunity to think of anything else. If ours is a favored community, we will be grateful and, it is hoped, wiser.

Regardless of the turn of events, the medical profession in Washington should have learned something from its experience with Asian influenza vaccine. The rather chaotic situation which has existed has deprived many physicians of the vaccine they urgently needed. The full details as to how this came about are not yet fully known. What is generally agreed by those who have been disturbed by the situation is that it should not happen again.

Last summer, when an outbreak of Asian influenza in this country seemed probable, conferences were held by the Surgeon General of the Public Health Service, Dr. Leroy E. Burney, and representatives of the American Medical Association. At that time, most of the discussion was devoted to a stand-by or medical care program should an epidemic occur. The AMA agreed to mobilize its state and county medical societies and allied health groups to meet whatever crisis should arise.

On July 22, Dr. Burney issued the following statement:

> "The Public Health Service, in coöperation with the medical profession, will stimulate and promote a Nation-wide voluntary program of vaccination against the prevalent strain of influenza. It will not, however, request Federal funds for the purchase or administration of vaccine—except for its own legal beneficiaries. The State and Territorial Health Officers and the American Medical Association have jointly assured the Surgeon General that community resources both public and private will be mobilized to provide vaccinations for persons who are unable to pay for such protection."

In a release to the press on August 1, Dr. Burney announced that by mid-September there would be a limited supply of Asian influenza vaccine. The Public Health Service, he stated, recommended that state and local officers give top priority for shots to those who care for the sick and to those who are needed on "essential" services. However, determination for priorities was to be left to the discretion of local health authorities and medical groups.

The first meeting of local health officials with the Medical Society's Committee on Public Health was held on August 13. It was then announced that a joint committee of the District Health Department and the Medical Society would be established "to make necessary definitive recommendations regarding control measures if it becomes necessary, and use of flu vaccine when available."

On August 20, the District Commissioners announced the formation of an Asian Influenza Advisory Committee composed of representatives of the Health Department and the Medical Society. Its duties and responsibilities were stated as follows:

"1. To develop and recommend policy for a specific program for the control of Asian influenza.

2. To promote the coördination of the joint activities of physicians and allied medical personnel, the hospital resources and the D. C. Department of Public Health.

3. To plan and recommend a policy for the utilization of medical resources, the appropriate control measures, the protection of personnel engaged in essential community functions, and to recommend the distribution of the vaccine allocated to the District of Columbia."

As soon as the Committee began to function, it discovered that orders for vaccine had long since been placed with some of the drug manufacturers by Government departments and business establishments. A few deliveries reportedly had been made. However, the Committee went ahead with the task of establishing priorities. Scores of communications were received from various institutions, business firms and groups stating that the services of their employees were essential to the security and well-being of the community.

The Committee devoted many hours to a seemingly endless task. It was during this period that a plea was forwarded to the drug manufacturers by the Committee that they coöperate with the District's Asian Influenza Advisory Committee. No immediate replies were received so a telegram was sent to each of the manufacturers. Through their representatives all promised to coöperate.

On the basis of this assurance, a communication was sent to all physicians together with a priority certificate entitling each one to 10 c.c. of vaccine when it was available. Reports were soon current that the pressure on drug manufacturers by Government departments and business establishments had resulted in their obtaining the vaccine without priorities. The Committee deliberated about what it should do. Physicians were protesting loudly that they had not obtained any vaccine or not enough to care for patients urgently in need of it. Others, and they were in the minority, were not only critical but losing their enthusiasm for the vaccine. Investigation of reports that various groups had obtained vaccine without priorities proved that they were exaggerated but still uncomfortably correct. And so the situation stands in mid-October.

It must be evident from the foregoing that a priority system for a vaccine in urgent demand and in limited supply cannot work on a voluntary basis. Not all of the blame, of course, can be laid at the door of a voluntary system. Manufacturers must coöperate wholeheartedly if such a system is to work. Furthermore, it must be admitted that official and voluntary health agencies should have been active earlier than they were. But the basic difficulty lay in the system.

It is much more pleasant to relate that, so far as the plans for the medical care of possible influenza victims are concerned, prospects are much brighter. The Committee has been very active and has laid a lot of groundwork so that, if the worst should happen, the best program possible will be placed into operation. The Commissioners' Order authorizing and detailing the program will be found on page 608.

Despite the handicaps under which it has labored, the Asian Influenza Advisory Committee was deservedly commended at a recent meeting by the Society's Committee on Public Health for carrying on as well as it has under most difficult conditions. Especially to be commended, in your Observer's opinion, are the Co-chairmen of the Committee, Dr. Daniel L. Finucane, the District's Director of Public Health, and Dr. Clifton R. Gruver, Chairman of the Society's Committee on Public Health. Much of the responsibility for the organization work has fallen on the shoulders of Dr. Frederick C. Heath, Deputy Director of Health, who has demonstrated that he is a capable administrator.

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### *Telephone Listings*

Queries received at the Society's Executive Offices from larger county medical societies throughout the country indicate that efforts are being made by publishers of classified telephone directories to "sell" physicians on the idea of listing their specialties along with their names and telephone numbers. Reports also indicate that in some instances they have been successful. However, our Medical Society has consistently opposed such listings. Some physicians, either unaware of the Society's attitude or who disagree with it, have had their specialties listed. The large majority have gone along with the Society's policy.

Several years ago the Society joined with the Commission on Licensure for the District of Columbia in urging the Chesapeake and Potomac Telephone Company, then publishers of the classified directory, to insert "M.D." following the heading "Physicians and Surgeons." The Company agreed to the request when it was discovered that several individuals listed under the general heading were not doctors of medicine, some not even licensed to practice any branch of the healing art in the District. Since that time the present publishers have communicated with the Society on at least two occasions requesting that it approve the listing of specialties, but in each instance they have been refused.

There are, of course, valid reasons for a physician wanting to have his specialty listed opposite his name. One of them is that he does not wish to be bothered with calls from persons seeking services which he does not render. Then, too, there are physicians with similar names not in the same specialty. In this event they may also feel it necessary to have specialty listings to avoid nuisance calls.

The Society's objection stems from the fact that the physician seeking a specialty listing may or may not be qualified in the field he claims. Publishers of the classified directory are, of course, in no position to judge a physician's qualifications. As a result, the public has been misled with sometimes tragic results. This, in the Society's view, outweighs the reasons advanced for specialty listings.

Some years ago, your Observer was situated in a Midwest city where a proctologist, not so recognized by a qualified professional body, listed himself in the classified directory as a specialist. In addition to his listing, he had inserted a small display ad. The medical society tried time and again to have his listing and advertisement removed but without success. The doctor threatened suit against the telephone company if his listings and advertisement were omitted. The result was they appeared in the classified directory until the physician's death.

In another instance, a woman licensed as an osteopath, chiropractor and naturopath inserted a special listing and a display advertisement stating that she was a dermatologist. She was not recognized as a specialist by any professional body. The District's Commission on Licensure and the Society received many complaints about this practitioner's treatment of patients. One appeared in the Society's Executive Offices in person to show the disfigurement which had resulted from the treatment given her. Both the Commission and the Society protested this woman's listing and advertisement to the telephone company but to no avail. Legal counsel advised the company against removing them because the woman threatened suit and, in his opinion, might very well collect damages. Although her advertisement from a medical standpoint was misleading, the woman was, as counsel said, technically within the law. In consequence, her listing and advertisement were carried in the classified telephone directory for years until her death.

Admittedly, these are not the usual run of specialty listings but indicate what their approval can lead to. The Society cannot, of course, prevent physicians from inserting specialty listings. It can and does request its members to support its position in the public interest.

Where the people of Washington are concerned, there is no need for specialty listings in the telephone directory in view of the services rendered by the Medical Bureau. The Bureau has available to it a list of Society members carefully classified according to type of practice for the primary purpose of providing the public with reliable information. Unfortunately, this information is not available in all large communities. It is to be hoped that more answering services, operated by medical societies, and there are quite a number now, will perform this vital and important public service.

### *Medical Society Spokesmen*

Much of the Society's prestige rests on the ability of and the impression made by those who speak for the organization. Contrary to the general impression, even among members, spokesmen are not limited to the President or the Chairman of the Executive Board but include most of the chairmen of committees who on occasion have effectively presented the Society's position with respect to matters in which their committees have particular interest. These chairmen have, not infrequently, appeared before Congressional committees, the District Commissioners, and various civic and other groups. Their appearances have generally reflected considerable credit on the Society and enhanced its standing with the people of the community.

Although several committee chairmen are veterans in organization work, there are a number of newcomers, many of whom are comparatively youthful. Some have already demonstrated superior qualities of leadership and have shown a genuine interest in the Society and its future. This is exceedingly important to a medical society as strategically situated nationally as ours.

One can imagine many members of the Society who will question the importance of the prestige factor to them as individuals. They might put it this way, "What value is the Society's prestige to me? I create my own among my patients as every doctor does. The only things that count with me are the direct benefits I get from my organization." Well, that is one point of view.

Admittedly, prestige, where the individual physician is concerned, is often an intangible benefit. Nevertheless, it can be very real. Expressions of articulate spokesmen have in some circumstances had a profound and direct effect not only upon the professional lives of individual physicians but on the people of the community. An example is the present Healing Arts Practice Act which raised licensure requirements in the District of Columbia to a new high. This Act became law largely due to the persistence of two able spokesmen, one a former President of the Society, the late Dr. Joseph S. Wall, and Dr. Edgar P. Copeland. Whether of direct benefit or not, however, the contributions of spokesmen to the welfare of the medical profession and the community have been cumulative, adding to the stature of the organization and the individuals who compose it.

It is not expected that these observations will attract more than passing interest. However, there may be a few readers who will be sufficiently impressed to look more favorably on the efforts of their chosen representatives. If so, they will have served their purpose.

As one long familiar with the local medical scene, your Observer wishes to salute the Society's spokesmen, whose valuable services to their profession and community too frequently go unrecognized.

* * *

### *". . . Medical Bills Must Be Controlled . . ."*

"If medical bills are allowed to skyrocket under the stimulus of the fast growing comprehensive medical coverages, then the benefits of the broader insurance may soon be priced beyond the range of the average family budget."

This statement was made recently by S. Bruce Black, Board Chairman of the Liberty Mutual Insurance Company, because of "the rapidly rising bills Americans must pay for medical treatment." Costs of medical care, he says, "have increased much more swiftly than living costs generally" and "control of these costs is essential to underwriting and pricing hospital and medical insurance."

For the purpose of emphasizing the urgency of the situation, Mr. Black points out that in the past 10 years overall hospital costs are up 132 per cent compared with the rise in the Consumer's Price Index of only 37.6 per cent. The average hospital bill has increased from $88.85 to $181.13, while per diem hospital care costs have more than doubled, from $10.04 in 1946 to $24.15 today. The country's medical bill and Government expenditures now total more than $14 billion annually, which averages about $207 per family.

Group major medical coverage written by commercial companies, Mr. Black states, insures the financial loss of the family "without attempting to classify the source of the expense." Included are such items as physicians' charges, hospital costs, employment of private and special nurses, surgery, physiotherapy, X-ray and radium treatments, and examinations, drugs, ambulances, transfusions, appliances and maternity complications.

Mr. Black does not refer directly to the increase in costs of physicians' services. He merely points out that the overall hospital costs "have increased dangerously." He believes that in their own interest, the medical profession, business and industry must coöperate to "develop better preventive medical programs and more economic medical treatment." He cites as an example the reduction of group insurance premiums where "proper" industrial medical control programs have been installed. Health care and education of employees under these programs during working hours, he says, have a dramatic effect on their off-hours' health.

Industry and insurance companies, he continues, must work more closely with "community hospital and medical people, both for prompt treatment of ill employees and for their early return to work. A more efficient and economical medical treatment will then be reflected in lower insurance costs, assuring the continued acceptance and growth of comprehensive medical coverage in this country."

Noteworthy in the foregoing is Mr. Black's concern with the overall costs of sickness, which at times are "staggering" and sometimes "disastrous." As stated previously, physicians' fees as such are not mentioned, at least not in the release which came to your Observer's desk.

This serves to emphasize a fact that is sometimes overlooked, that the heavily burdened patient is not concerned alone with the physician's fees, but the total cost of his illness. The physician is usually considerate where the size of his bill and the method of payment are concerned, but that does not alter the fact that the patient faces a serious financial crisis. This, then, is the problem which insurance plans are attempting to solve with major medical coverage.

As for Mr. Black's proposal that business, industry, and the medical profession coöperate, this would seem desirable provided other groups are included. Among these are Blue Shield Plans, which also write major medical coverage, labor unions, and Government employees. These and other representative nationally organized groups will inevitably have an important voice in decisions with respect to overall "medical" costs.

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### *Your Own Story*

Upon reaching their late maturity, a growing number of physicians have the urge to tell their life's story. Autobiographies by their more or less eminent fellows have convinced them that they have an equally interesting tale to tell. And so another literary effort is born. Whether any publisher can be convinced of its merit is another matter.

As Dr. Theodore Kamholtz discovered, this urge to leave one's story to posterity has its amusing aspects. With few exceptions, a formula adopted by the author varies slightly. In fact, Dr. Kamholtz writes, the similarity is so striking that "I think I can tell you how to write yours."*

"The chief requirement is either a prodigious memory or the foresight to jot down your *bons mots* and heroic deeds as they occur. Since the public may not accept you in the form of a twenty-volume encyclopedia, the first problem will be to weed through your trunkful of notes and arrange them in logical order."

He suggested that the would-be author might adhere to the following outline:

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* "Autobiography, Anyone?" Medical Economics, September, 1957, p. 148.

"*Childhood—The Annunciation:* Thus in the midst of a full and happy childhood it came to you, as you watched your father castrate his cattle, or your sister have a nose bleed, or your neighbors succumb to Tsutsugamushi fever, that you would some day become a Doctor.

"*Early Youth—The Resolve or Dedication:* What with going to school and working on your newspaper route, it wasn't easy to perfect yourself in the basic arts and technics that were to prove so valuable later. (You comment here on your first motor-driven amputation saw, on the effects of anoxia on earthworms, on feeding your dog onion soup.)

"*Medical School—Professional Aspect:* You describe the great characters and teachers you studied under and the inspiration they gave you. (You got an A in everything but neuroanatomy. The professor gave only Bs in this course because no one knew where the soul was.)

### YOUR PRIVATE LIFE

"*Medical School—Social Aspect:* In this section you want to prove that you weren't a prig and that all work and no play and so forth. So you recount the gayer aspects of your student life (how you spent the week-end in jail after drinking the ether from the operating room; how you cached the anatomical specimen in your landlady's handkerchief; how you met the woman who was destined to become your life partner later on).

"*Interneship—Historical:* Now you are warming up to the heart of your book. You enter the subject obliquely. First, you note the quaint aspects of the physical facilities (the horse-drawn ambulance, the operation in dress suit). Then you tell about the personnel (those old duffers were actually better doctors, although they knew nothing about blood counts and such). Next you come to your first case, which you have never forgotten to this day. (At this point you may become somewhat suspicious of yourself, noting that your memory for the long ago is much better than for recent events.)

"From here, your medical memoirs will depend on your literary methodology. You may remain chronologic, detailing each change of residence. Or you may write your chapters according to topics and themes. At any rate you're pretty sure to cover some such subjects as these:

### PATIENTS YOU REMEMBER

"*The Humorous and the Bizarre:* The patient who swallowed his toupee, etc.

"*The Dramatic:* Performing an appendectomy on the carrousel during the county fair.

"*The Firsts:* The number of these will depend, of course, on how great an innovator you were. You should be good for a few firsts, even if only first-to-suggest-washing-milk-bottles-in-your-county. The idea is to make your life sound like pioneer stuff. Quote the death rate before you started practice and twenty years after.

"*The Philosophical:* At this point, you improvise, and no factual bars need hinder you. Some suggested jumping-off points:

(a) 'Medicine Yesterday, Today, and Tomorrow.' Under this heading you discuss such questions as 'Does penicillin really change human nature?' or 'Is medicine practiced any better today than in days of yore?'

(b) 'The Mad Pace.' Here you may talk about the effect of internal combustion machines on the incidence of gallstones.

(c) 'Miscellany.' This heading gives you a chance to try your own individual explanation of Khrushchev's psychosis, or the relationship between smoking and the divorce rate.

"*Conclusion—Whither Are We Going?* The note here is mellow. You believe you have led a full life, and as you gaze on the grandchildren of girls you delivered you are happy. But oh, if you were only 16 again, and able to live through the wonderful discoveries that are bound to come! At this point you give the final proof of your absolute modernity—how you took up flying and marijuana at the age of 78.

"There it is: the doctor's digest reduced to its most transparent formula. Yet I'm a sucker for it. When the chips are down and the stethoscope checked in, you can write your epic of 'One Doctor's Life' with at least one certainty—I'll buy it!"

T. W.

# EMERGENCY MEDICAL CARE PROGRAM TO COMBAT ASIAN INFLUENZA

The following Commissioners' Order No. 57-1947 was issued on October 8, 1957, to become effective when it is determined by the Director of Health for the District of Columbia that an emergency exists:

Subject: Temporary Expansion of the Medical Care Program in the District of Columbia

At the Board meeting on October 8, 1957, the Commissioners received information that there is an unusual prevalence of an influenza-like illness in the District of Columbia. Reports of absenteeism in certain public schools show 250 per cent increase over the usual rates, some schools having 25 to 30 per cent absenteeism. There also is a 50 per cent increase in the rate of absenteeism in adult workers from a sampling group of 17,000 employed persons; a progressively increasing number of requests for home calls for District Physicians of the Department of Public Health from the medically indigent sick persons, especially from Police Precincts Nos. 5, 9, 11, and 14; and an increasing number of requests for bedside nursing visits by Public Health nurses from medically indigent persons suffering from influenza-like illness.

Private physicians and some of the voluntary general hospitals also report a progressively increasing number of patients being treated for influenza-like illness.

The Acting Director of Public Health states that the Department of Public Health has already modified its regular program so that more personnel will be available to take care of this unusual increase of influenza-like illness afflicting the medically indigent and indigent persons. However, in spite of this change of emphasis, the demand for medical care is of such magnitude that the Department cannot at present render minimum adequate medical and nursing care to all of the medically indigent and indigent patients suffering from an influenza-like illness who request physicians' and nurses' home visits.

The Asian Influenza Advisory Committee and the Director of Public Health have requested the Commissioners to formulate a program to provide medical and nursing care to the medically indigent and indigent sick persons needing such care should there be an epidemic of influenza-like illness.

The Acting Director of Public Health further states that there is every indication that this acute illness will become more extensive in the very near future and that plans should be made to cope with a possible city-wide epidemic which could involve at least 20 per cent or more of the total population, afflicting 170,000 or more persons, including non-indigent as well as indigent.

In view of the foregoing, it is therefore

"ORDERED: In order to save life or prevent the development of other serious medical conditions in the medically indigent and indigent sick persons residing in the District of Columbia during the period of this unusual prevalence of an influenza-like illness, the following provisions shall be in effect:

"Section I. Temporary Supplement of Medical Resources in the Department of Public Health.

During the period when this unusual prevalence of influenza-like illness occurring in the medically indigent and indigent population is so extensive that the present resources of the Department of Public Health cannot render the necessary medical care to these patients, while at the same time this unusual prevalence is not of sufficient magnitude that the Commissioners should legally declare that a 'State of Emergency' exists due to an epidemic illness, the Department of Public Health is hereby authorized to recruit additional physicians, Public Health nurses, hospital nurses, technicians, pharmacists, Medical Assistance workers, and administrative records personnel on a temporary basis to the extent necessary in order to provide the minimum amount of medical care necessary for these patients, and to provide the necessary supplies to render such care.

These expanded services, including temporary positions, shall be expeditiously terminated by the Director of Public Health as the need for medical care services to the medically indigent and indigent sick suffering from influenza-like illness decreases.

"Section II. Authorization for the Visiting Nurse Association.

The Visiting Nurse Association is hereby authorized to render bedside nursing care visits in excess of the dollar limitations of the current contract to indigent patients referred by the Department of Public Health. The rate for a bedside nursing visit shall be $3.04 for each home visit.

"Section III. Authorization for Planning and Preparation for an Epidemic.

The Department of Public Health shall continue its activities to develop the potential medical care resources to take care of the medically indigent and indigent persons.

"SECTION IV. Provisions of a Medical Care Program for the Duration of a Declared 'State of Emergency' due to an Epidemic of Influenza-like Illness.

Should it become necessary for the Board of Commissioners to declare that a 'State of Emergency' exists due to an epidemic of influenza-like illness, the following provisions shall, in addition to Sections I, II and III hereof, be in effect for the duration of such 'State of Emergency' in order to save life or prevent the development of other serious medical conditions in the medically indigent and indigent sick persons.

The limitations of coverage permitted by the legally declared 'State of Emergency' shall be dependent upon the geographic extent, the number of persons afflicted, and the characteristics of the illness within the duration of the epidemic.

A. *Physician Services.* The members of a panel of physicians approved by The Medical Society of the District of Columbia and the Department of Public Health are hereby authorized to make home visits to medically indigent and indigent sick patients when so requested by the Medical Bureau of The Medical Society of the District of Columbia, the Police Precincts, or the Department of Public Health after such requests have been reasonably screened for eligibility. The rates for such home visits by physicians shall be $5.00 for 1 patient and an additional $2.00 for each additional patient treated at the time of the home visit.

Approved forms shall be used, and the original must accompany the voucher requesting payment for such services.

B. *Pharmacy Services.* Physicians' prescriptions for the medically indigent and indigent sick persons shall be filled at the pharmacies licensed in the District of Columbia willing to participate in this program, or at the pharmacy of the Department of Public Health. The prescriptions must be written on approved forms.

The rates for non-compounded prescriptions shall be the cost of ingredients (either Blue Book or Red Book prices) up to $1.34, 40 cents for overhead and profit, and 10 cents for label and container; for ingredients costing $1.35 and over, add 30 per cent for overhead and profit and 10 cents for label and container, but in no case shall the cost exceed the regular retail prices; however, the minimum charge shall be 75 cents.

The rates for compounded prescriptions shall be the cost of ingredients (either Blue Book or Red Book prices) up to $1.99, 60 cents for overhead and profit, and 10 cents for label and container; for ingredients costing $2.00 and over, add 30 per cent for overhead and profit and 10 cents for label and container, but in no case shall the cost exceed the regular retail prices.

The approved prescription forms shall be executed in duplicate, the carbon copy to be kept for the pharmacist's records, and the original submitted with the voucher requesting payment for such services.

C. *Bedside Nursing Visits.* The services of the Public Health nurses of the Department of Public Health shall be used to the fullest extent possible to provide bedside nursing visits to the medically indigent and indigent sick patients. The Department of Public Health is authorized to employ additional Public Health nurses on a temporary basis to the extent necessary to provide minimum bedside nursing visits. Nursing records for each family receiving such services shall accompany the voucher requesting payment.

D. *Supporting Personnel and Supplies.* The Department of Public Health is authorized to employ on a temporary basis the necessary supporting personnel such as switchboard operators, personnel for screening calls for medical care, and administrative records personnel, and to provide the supplies necessary to support these personnel.

"SECTION V. Effective Dates.

A. Sections numbered I, II, and III of this Commissioners' Order shall become effective immediately.

B. Section IV of this Commissioners' Order shall become effective immediately only to the extent necessary for planning and preparation purposes, but shall not be put into operation unless and until the Commissioners issue a subsequent Order legally declaring that a 'State of Emergency' exists due to an epidemic of influenza-like illness.

C. Actions under all Sections of this Order shall progressively be curtailed as rapidly as the incidence of the influenza-like illness permits as determined by the Director of Public Health by and with the advice of the Asian Influenza Advisory Committee.

"SECTION VI. The Department of Public Health shall maintain separate records of all costs resulting from the application of Sections I, II, III and IV hereof, and shall submit to the Commissioners weekly reports of such costs. These reports shall reflect the total cost of this expanded program, as well as those costs that have been diverted from the existing programs of the Department.

"By order of the Board of Commissioners, D. C."

* * * * *

The above plan has been approved by the District Medical Society's Committee on Public Health and the Executive Board. The members of the Society are being canvassed for volunteers to serve on panels referred to above should the necessity arise.

## INFECTIONS IN NEWBORN INFANTS

Dr. Daniel L. Finucane, Director of Public Health for the District of Columbia, calls attention to an increasing incidence of epidemic staphylococcal infections arising in hospital nurseries in the District of Columbia. Since few of these infections occur during the infant's hospital stay and most of the infections occur after the infants have been discharged from the hospital, the presence of an epidemic may not be recognized and suitable control measures may not be instituted.

In a recent epidemic investigated by a local hospital, 24 newborn infants and 2 mothers were found to have staphylococcal infections during a 6-week period. Only 3 of these cases were recognized during their hospital stay. The 2 mothers had breast abscesses. Of the 24 infants, 13 had impetigo, 4 had breast abscesses, 4 had furunculosis, 2 had conjunctivitis, and 1 had sepsis.

In order that these epidemics may be recognized early and suitable control measures instituted, it is strongly urged that all physicians comply with existing regulations and report promptly to the Department of Public Health every case of impetigo or related infection in newborn infants.

## MEMBERSHIP

The following applicants for membership were duly elected to membership by the Executive Board, October 21, 1957, in accord with Amendment XI, Section 2, of the Constitution and By-laws of the Society.

### *Active Members*

Dorothy R. M. Brodie, 2132 North Brandywine Street, Arlington, Va.
James C. Gray, 14 Logan Circle, N.W.
Richard F. Manegold, 1835 Eye Street, N.W.
William L. Marsh, 901 23rd Street, N.W.
Joseph K. Perloff, 4100 W Street, N.W.
Melvin W. Sandmeyer, Jr., 8331 Grubb Road, Silver Spring, Md.
Francis L. Smith, 1822 Fourth Street, N.W.
John R. Weimer, 1302 18th Street, N.W.

### *Associate Members*

Robert Alberts, 5911 16th Street, N.W.
Herbert E. Lane, Jr., 2310 South Culpepper Street, Arlington, Va.
Aymar P. Lechaux, 312 South Washington Street, Alexandria, Va.

### *Affiliate Member*

Edward A. Beeman, 10620 Georgia Avenue, Silver Spring, Md.

### *Resident-Intern Member*

George E. White, 2415 20th Street, N.W.

The following applicants for membership will be voted on at the meeting of the Executive Board, November 25, 1957.

### *For Active Membership*

Arthur S. Cain, Jr., University of Kansas—1940
James J. Foster, Georgetown University—1947
Warren C. Johnson, St. Louis University—1947
Richard H. Kosterlitz, University of Illinois—1949
Jean H. Menetrez, McGill University—1950
Harold I. Passes, University of London (England)—1949
Irvin H. Peiser, Jr., University of Tennessee—1951
Homer L. Twigg, Jr., University of Maryland—1951

### *For Associate Membership*

Panayiota A. Athanasiadou, University of Salonika (Greece)—1949
Robert G. Brewer, George Washington University—1952
William C. Loh, National Medical College of Shanghai, China—1950

*(Continued on page 622)*

# AS A PHARMACEUTICAL MANUFACTURER SEES IT*

EDMUND R. BECKWITH, JR.†

*President, Crookes-Barnes Laboratories, Inc., Mountain View, New Jersey*

Most people who share in the vital decisions of a pharmaceutical company are businessmen. True, some are physicians by training, some are physiologists, some are something else. But essentially the decisions to be made are business decisions.

If to make a profit were the only premise, our task would be a good deal more simple. But there are two important qualifications. The first is this: With no exceptions of which I am aware—if it isn't good medicine, it isn't good business either. Secondly, there is coming more and more a responsibility upon the manufacturer for activities, expenditures, and foresight in public health areas which are not directly related to the manufacture and sale of drugs. For those whose companies are international in scope, this is rapidly becoming a most pressing matter.

The hard core remains that we are in business and that the game is to make a profit this year bigger than last, and next year bigger than this. But we must do it within the context of these two profound qualifications.

Our relationships touch many groups of people: the wholesale druggist, the administrative staffs of hospitals, the Government, the retail pharmacist, the physician, and the patient. The most important of these, both to you and to us, is the patient.

I hope that you will bear in mind that each of us is a prisoner of his own experience. Hence, much of what I will have to say evolves from my own first-hand knowledge of what we may do as one organization or from direct observation of what our competitors are doing. I will merely let that general qualification apply to everything from here on.

Because you are the funnel through which all of our activities must pass, we would be unwise, indeed, if we did not attempt continuously to understand your problems, to understand your thinking, and to adjust ourselves to changes in both. There are many mechanisms available to us. Sometimes the problem is that we have too much information or that we have contradictory information, or that we don't understand the implications of what we have. We are keenly aware of many of your complaints. I have selected seven to discuss that seem most important to me:

1. Promotion is too expensive.
2. Drug prices are high and are too variable.
3. There are too many similar products.
4. Information reaches the public too soon.
5. Drugs should not be sold over the retail pharmacy counter, but only on prescription.
6. The manufacturer makes exaggerated claims.
7. Manufacturers make too much money.

## PROMOTION COSTS

Now, let's take these one at a time. One might say, "Cut down pharmaceutical promotion and lower the price to the patient." In principle, this may be right. But this assumes, on one hand, that less promotion would produce the same sales and on the other that those of us responsible for the promotion of drugs know far more than we do. We are still trying to find out what the relative values are and what the changing relationships are of money spent in direct mail, or in journal advertising, or in television, or in films, or in increased numbers of pharmaceutical detailmen, or in the numbers of samples that we use, or in the form of those samples. We are learning much. Some of it is discouraging.

We know, for example, that you frequently criticize us for samples which are too small. And, let me say here that the size of our sample budgets is a matter of tremendous concern to all of us. There is waste and we know it. But we know from actual testing that despite your criticism, larger samples do not usually produce enough additional business to warrant the cost.

You criticize us for too many pieces of direct mail on the same product. And yet we are faced with demonstrations from our own testing that the quality of the direct mail is often less important than the frequency with which it is mailed.

Availability of the material is often the most important factor. You may recall the story of the chorus girl who was asked what reading material she'd prefer if marooned on a lonely island. Her answer: "A tattooed sailor."

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* Read before the Medical Society of Union County, New Jersey, November 14, 1956.

† Director, American Pharmaceutical Manufacturers' Association. For many years Mr. Beckwith was associate editor of *Medical Economics*.

The reading material may have been less than classic, but at least it was at hand. So goes direct mail at times.

We are disturbed that golf outings or fishing parties given by some companies increase sales of their drugs. We are distressed that the paper weight or letter opener seems to produce sales. We would be far more comfortable if so often it did not appear that methods that sell soap also sell drugs.

For those of us who would like to see pharmaceutical promotion on a completely professional plane, there is still the need to face the fact that we may have actually been underpromoting useful drugs. As time goes on, our allocations of promotional expenditures become more and more precise. But, we are far from, and in my estimation never reach, the point at which a precise formula will replace experienced judgment and, hence, some measure of error.

Before leaving this question, perhaps two generalities would be helpful. The first is the fact that even an important new drug will not be used if it is not promoted. One could go further and say that an important new drug will not be used unless the promotion is skillful. Hence, less promotion is not likely to produce the same sales effect.

The second generality is this: Lowered promotion costs would usually result in lower sales, consequently in higher per unit manufacturing costs, and virtually no saving to the patient.

## Drug Prices

Now, we often hear: "Drugs cost too much and prices vary too much." It would be wrong not to agree that in some cases this is true. The industry is vulnerable, in my opinion, because of one or two situations. Your pressure and the pressure of the patient may in time correct this. If it does, it will be a favor to us all.

In general, however, drugs are not too expensive. The average prescription price for one-half billion prescriptions filled last year was $2.63. Drugs, taken as a generic term, are not too expensive.

Most of the drugs for which you write prescriptions are post-World War II developments. In terms of the research expenditures behind them, they are not expensive, any more than the cost of an office visit is not expensive in terms of the money you have invested in your preparation (or education). The average annual investment for all of the principal pharmaceutical manufacturers is 5 per cent of their net sales or equivalent to about half of their net profits. In a number of cases, companies are spending 10 cents of every incoming dollar on research and figure their gambles at odds of 50 to 1.

Now, prices to the patient do vary widely. Here's an interesting example: In shopping one of our products in 48 retail stores, our first objective was to find out whether these stores dispensed the drug exactly as it was prescribed. Incidentally, they all did. For 24 tablets, which cost the pharmacist $1.00, the range of prices charged to the patient was from $1.10 to $2.50. The most remarkable thing is that 26 stores charged below a reasonable mark-up (and, incidentally, lost money on the transaction). Eighteen charged a reasonable price. Only 4 priced the prescription exorbitantly. We have seen this pattern repeatedly.

Prescription prices vary for several reasons. The pharmacist is an individual professional operator. He is entitled to charge what he thinks he must to stay in business. Some pharmacists, like some manufacturers, like some physicians, are not as good businessmen as they should be. The exorbitant price is probably as often a reflection of poor business practice as it is of greed.

Prices vary also depending on the type of store and the location. It's a curious thing that you as physicians would like to see pharmacies of almost a completely professional character without the pots and pans, the chow mein, the luggage, the children's toys, phonograph records, and the like. However, the more nearly a store approaches what you would like it to be, the more the pharmacist is faced with employing only professional personnel and with stocking only expensive inventories that turn over less rapidly. Hence, the more the store is what you wish, the higher its prescription prices.

Let me demonstrate: The supermarket might buy a loaf of bread for 19 cents and charge 21 cents. This is a 10 per cent mark-up. But because of his traffic studies, this operator can estimate very closely the actual amount of bread he will sell each day in the week. And, if he doesn't sell it, the baker takes it back anyway and he doesn't have to pay for it. The next day he spends the same 19 cents for another loaf and at the end of the week he has made 12 cents on that one investment—made 6 times. This is rapid turnover, several times a week, at a low mark-up.

Drugs, however, stay on the shelf until you prescribe them. What's more, while the supermarket stocks only a few brands—only the fast-selling brands—to provide you with good service, the pharmacist carries both the drug brands you prefer and the brands your colleague down the street prefers even if you should prescribe an item but once a year.

The average pharmacy can count on a turnover of its stock a little less than twice a year. The average store carries about 8,000 items. The sanitary products, the cosmetics, the perfumes all help to pay the overhead of electric light bills, insurance, and rent. But the professional store which does not carry such items must depend upon higher prescription prices to offset high wages and slow turnover of stock.

### Similarity of Products

You are sometimes critical of "too many similar products on the market." Unfortunately, you are more right than you know. Let's take as a starting premise the fact that you would not like to have this solved by Government regulation. Then, we have got to consider this as a problem of the market place. There are too many reserpines. As a matter of fact, there may be 100. There are 88 thyroids available. There are 200 antacids in your Physician's Desk Reference. There are so many multiple vitamin products, I have no idea what the actual total is. I am reminded of the fact that when one research organization was doing studies of the vitamin market for a substantial number of clients, one of the clients remarked in exasperation: "The only people making money on vitamins are you people who measure the sales."

Last year there were about 480 new products or additional dosage forms put on the market. Less than 10 per cent of these will be commercial successes. We are all getting more cautious in each succeeding year in the introduction of new products because the odds are fantastically against their success and because the cost is getting to be so great. A new product to us today may represent a half million to a million dollar marketing decision, and this we cannot take lightly.

This competition, however, of similar products keeps the industry healthy, allows you to change from the product of one company to that of another, and, if you will, keeps us all virtuous. This may be a wasteful system, but so is the system that has 73 medical schools competing for faculty, students, and grants, and so is the system that has individual state health departments and individual municipal governments. If we did not have this kind of system, you would not have two companies battling each other for your prescriptions of a similar chemical. You would not have us embroiled in a thousand ways with our competitors. We would get soft. We would probably overprice and underpromote. Our incentive would be reduced to do research in new fields, or to improve the products we already have. The person who would get hurt in the end would be the patient.

Don't misunderstand me. Even the cruel discipline of the market place will never completely resolve this problem. My thesis to you would be that the waste is worth the benefit, for year by year it forces our judgment to be more perceptive and more precise.

### Premature Publicity

You charge us with "publicity that reaches the newspapers and radio, or television too soon and too spectacularly." To this we must plead guilty. We are, as an industry, infants in the realm of publicity and public relations. Our own organization has been faced with this for a number of years and almost daily we are confronted with new problems. I was appalled to read in a national magazine not long ago a statement attributed to 3 physicians from one of our most respectable research centers involving a chemical with which we are intimately connected. The clinical work is so premature we don't believe it ourselves. And yet this tipped into the public domain and, incidentally, to our competitors.

We were not at fault, and frankly, I don't think the physicians involved were either. Nor am I leading up here to a condemnation of science writers, for I have a very high respect for their ability and their integrity.

The question of the public's right to medical knowledge is a difficult one. In 1923, all consumer magazines combined ran a total of 30 medical articles, 19 of them on TB. In 1953, just 30 years later, there were 299 medical articles and scientific pieces in national magazines. This kind of copy sells, not because the editors wish it that way, but because the public is insatiable.

Whereas we as manufacturers have had in the last 20 years to become accustomed to and to accept the regulations imposed upon us by the Federal Government, and therefore to live in a fishbowl of inspection, the physician, too, is having to become accustomed to the fishbowl of public scientific interest and knowledge.

Do we as manufacturers use these avenues to excess? Yes, I think that we are perhaps inclined to. But there is no solution for this except the individual experience of the individual manufacturer. One company made a public relations mistake 5 years ago—an innocent one. It was an act of good faith and naïvete. Since then, this bitter mistake has cost an estimated $2 million in sales. Believe me, I doubt that organization will ever be guilty again of a similar error.

Together we must face two simple facts:(1) People want scientific reading material. They will get it one way or another. All of us are better off giving them good material than leaving this to chance. Medical societies all over the country are now following this course of taking an adult public into their confidence. (2) Although it may seem cumbersome and slow to you, where a manufacturer is guilty of excess, he will eventually pay the price and he will learn his lesson.

## Prescription Versus Over-the-Counter Sales

You frequently express strong reactions about the labeling of some products. You would prefer to see the drugs you use with a "prescription legend only." Sometimes we are faced with criticism so strong that you cease prescribing products when you discover that they may be purchased over-the-counter. Fortunately, this is one spot where the answer is quite simple.

The Durham-Humphrey Law, under which the Food and Drug Administration operates, and the Food and Drug Administration regulations make our situation quite clear. A drug which can be labeled with adequate directions which will make it safe for the layman to purchase and to use without a physician's advice must be labeled for over-the-counter sale. A drug which cannot be used by the layman without a physician's diagnosis and instructions must be labeled with a prescription legend. It is the manufacturer's decision, but not his choice.

Now, an interesting aspect of this is that the decision rests with the manufacturer. This is in keeping with our American philosophy of Government. The Food and Drug Administration is not a top sergeant empowered to dictate each step a manufacturer takes. The Food and Drug Administration is a policeman empowered to enforce the law when the law is broken. This distinction is most important.

In actual operation, we on occasion have been requested to change the legend on drugs of our manufacture to over-the-counter. When we have been requested to do so, we are in the same position as the automobile driver who is told he cannot park so close to a fireplug. He can refuse to move and later argue it out in court, or he can move.

The labeling on a product is the result of the most careful consideration as to its safety in the hands of the layman. We cannot choose the labeling for some supposed economic gain.

## Exaggerated Claims

You accuse us of exaggerated claims. Another way of saying this, and perhaps a more kindly way from the manufacturer's point of view, is that you accuse us of basing claims on inadequate evidence. On occasion, it turns out that you are right.

Let's assume, on one hand, that some of us are occasionally guilty of promising performance from a drug which it can't provide. The solution is for you to register your feelings directly with the manufacturer. You would be surprised to hear how few letters physicians write expressing doubt in this area.

But there is an aspect here of considerable intellectual interest. We have become so accustomed to coming to you with reprints, abstracts, fragmentary reports of work done by physicians in research centers or medical schools, that you have been acclimatized to believe only reports of other physicians. What this really means is that you don't believe us.

The blame is on us. But the fact is that we should always have more information than appears in any one report or even in all the published reports about a drug, for by the nature of our clinical research operations we collect hundreds of case histories in the form of personal communications and unpublished reports from other physicians.

I don't know the answer to this, but I find it intensely disturbing. I hope that in the next few years we can so conduct our businesses that we can reverse this situation. It hurts our pride to be accused of making claims based on inadequate information when actually we have far more than we are able to disclose.

This is no time for excuses, but this problem is a most intricate one. For example, just a few weeks ago there was in Washington a large meeting of clinicians, Government people, and manufacturers to discuss a mammoth study of tranquilizing drugs. Most important point to come out of three hard days' work: The clinicians could not suggest benchmarks which they themselves would consider valid. It is always extremely difficult to establish firm criteria and to get any two physicians to deal with a clinical problem in exactly the same way. And, of course, it is sometimes nearly impossible to say at the outset what it is precisely that one is searching for, or else it wouldn't be searching.

Despite the difficulties, it hurts our pride to be in a position in which you don't believe us. And whether we can ever get to the position where you feel that if Company A says something it must be right, or if Company B says something, it can't possibly be otherwise, then we will have accomplished a great deal. This will come about possibly if you continue to distinguish between those companies whose words you trust and those you don't. I think it would be well if more and more you drew this distinction and if you registered your complaints directly and forcefully.

## Excessive Profits

Now this is possibly the touchiest of all subjects. You say we are making too much money. In some cases, in some years, this is true. However, the bonanza years of a few companies tend to obscure the general picture.

Let's assume for the moment that a given company introduces a new drug. The preparation may be such a departure from previous therapeutic items that it will take two or three years for competitors to catch up. Even such a drug will not begin rapidly, but by the second year will be selling in very high volume. By the third, it may be truly of magnificent proportions.

The company fortunate enough to find such a drug will normally expand its promotional effort, its manufacturing effort, and its research effort. But it would be most unwise to expand more than a limited amount in relation to the climb of sales. One would be foolish to take on fixed expenditures when the likelihood is that not more than one, or two, or three bonanza years can be counted on. This does mean that in those years the profits of that one company are too high when regarded as a percentage of sales.

There is another factor also. In some cases, sheer good management of a business has created a profit structure which becomes a bear by the tail. One company I know of, by the change of its distribution policies, has dramatically changed its profit structure. Four years ago, it cost that company $1,150,000 for all the processes involved in receiving an order, editing it, tabulating, packing, shipping and collecting. It cost this much when the sales volume was $10 million. Three years later when the sales volume had risen to $20 million, the cost for these same functions had been reduced to $850,000. To me, this is another way of saying that skillful management of its distribution had increased the net profit on $20 million of sales by a million and a half dollars before taxes. Others have since 1950 dramatically affected their profits by the same kind of management.

Now, what can be done? Lower the prices of all products in the line? Possibly. Invest more heavily for the future in terms of promotion and research? This is a better solution. But then there are limits to how much money one can invest wisely. Frankly, on a $2 million research budget, one could not quickly add $1 million without tremendous waste. Expansion must be built slowly.

If one cuts prices, the means for investment in the future are removed. If one builds slowly, two or three years of unusual profits result.

This is the problem, but in any one year it exists for only a handful of individual companies. For all but a few of the 200 companies in the industry, the normal year will show moderate net figures at the

*(Continued on page 622)*

# On the Lighter Side

I can never approach Thanksgiving with equanimity. There is always some particular thing that keeps cropping up in my memory that forbids me to pass up this solemn season without a deep sense of being thankful for all the small favors that people have done for me; for the helpful, friendly hand when the going was rough; for seeing the lighter side of many a sobering experience, and for that soul of souls—the friendly doctor who has given me material for this column. Believe me, my friends, that soul will reap a bounteous reward in that storied place where treasures are built up—where neither rust nor mold will corrupt, and where thieves do not break in and steal.

It has often occurred to this scribbler that there must be a mountain of informative gold in these here medical hills that comprise the boundaries of the D. C. Medical Society—mountains of gold that have never been scratched, let alone explored. Yes, mountains of interesting golden information and titillating tales that have never been discovered. What a raft of regaling stories that information could tell if it were unburdened and unlocked from its secretive captors!

We have been perusing volumn XXIII, number 11 of the Medical Annals dated November 1954. Lo and behold, and what do we read! I quote, "There has been a recent dearth of news from our colleagues concerning their nonprofessional activities. This seasonal drought may have been due, we hope, to the change-over from a summer of golf, boating, fishing, etc., to a busy autumn program of medical activity. . . . We have waited to hear of exciting, far-away places seen and visited on the many summer vacation trips. But none have come."

Three full and plentiful years have passed since this begging mission was printed. Three years in which changes small and profound have amused and shaken the world. We have seen Rock 'n Roll create a monster of frenzy in the teen set. The idol of "You Ain't Nothin' but a Houn' Dog" has produced a crashing crescendo of cacophonous squeals that shattered the illusion of maidenly modesty by the simple expedient of an anatomical wiggle associated with a quivering of the knees to the tune of a guitar.

We have read of military invasions into Budapest and Little Rock and the attendant propaganda for it and against it.

The scientific world that we have known has blown its top, and there are soaring satellites, and mined missiles, and heavy hydrogen bombs all over the place. Even the flying saucers of a few years ago have become much more logical to believe since the Russions have launched their man-made moon.

In baseball, the perennial world champions, the New York Yankees, have made news by bowing to the Milwaukee Braves after the string had run out.

In boxing, the championships have been exchanging champions at a rapid rate, except for old Sugar Ray, who manages to regain his middleweight crown whenever his coffers get low.

And thus it goes! All around us the world is making news—but we do not hear any of it coming from the rank and file of the D. C. Medical Society. We scratch and we scratch for a story, but the harder we scratch the faster the gold turns to quick silver and slithers away. Look, fellows! Even a little thing like, for instance, what the inside of a jail looks like could be mighty interesting. Even an old beat-up jail like the one they have in Ocean City, Md. Or—a big thing, like prospecting for uranium in the rocky hills of the Far West, could be a dilly of a story.

Somehow or other, I feel sure that one of our medical friends must have done something worthwhile this summer—like winning a competitive award at golf, or fishing, or tennis, or dancing, or some other indoor sport. One would believe that that medical friend would be pleased as all get out to talk about it. What that medical man does on the lighter side is like hearing a profound thinker and a serious scientist for the first time at a lecture, and then turning him around to find out that behind the serious front is the real human who indulges in the lighter things just like you and me.

The trouble with most of the interesting tales I hear—we can't print! But we must be thankful, this Season of Thanksgiving, for those medical friends who have shared with this column their valuable time and their interesting experiences, and in so doing have helped all of us who have read them to play a little, to live a little, to forget a little, and to reminisce a lot.

J. Earl Kadan, M.D.

# News and Personals

## MEETINGS

Members of the **Section on Ophthalmology** of the Medical Society of the District of Columbia will hear an address, December 10, by Dr. P. Robb McDonald, of the staff of the Wills Eye Hospital, Philadelphia, Pennsylvania. Dr. McDonald will speak on "Complications of Glaucoma Surgery." This will be a regular dinner meeting at the Kennedy-Warren.

**The Second World Conference on Medical Education** is scheduled to be held in Chicago, August 30 through September 4, 1959. The theme of the Conference will be "Medicine—A Life Long Study." It will be sponsored by the World Medical Association in collaboration with the World Health Organization, International Association of Universities-and the Council on International Organizations of Medical Sciences.

The Program Committee, under the chairmanship of Dr. Victor Johnson, Director of The Mayo Foundation for Medical Education and Research, University of Minnesota Graduate School, invites members of medical schools and faculties; member national medical associations and their medical education committees; and organizations and individuals interested and qualified in medical education to submit to it topics and problems that should be considered within the frame of reference of a conference devoted to exploring the continuing education of the doctor after graduation from medical school.

Four general section subjects are currently being considered. These are:

1. Basic clinical training for all doctors.
2. Advanced clinical training for general and specialty practice.
3. Education for research and teaching.
4. Methods of continuing medical education throughout life.

The Committee needs suggestions and guidance in the selection of conference topics and the names of eminent doctors qualified to speak on these subjects. Every medical organization of the world is cordially invited to submit the names of representative speakers and participants for panel and group discussion, as well as topics and subjects. Suggestions should be addressed to The World Medical Association, 10 Columbus Circle, New York 19, N. Y.

**The Fourth International Conference on Goiter** will be held in London, England, at the Royal College of Surgeons, July 6, 7 and 8, 1960, under the auspices of the London Thyroid Club and the American Goiter Association. Those who desire to submit abstracts of papers to be considered for the program should write to Dr. John C. McClintock, 149½ Washington Avenue, Albany 10, New York, or to Dr. Selwyn Taylor, 3 Roedean Crescent, Roehampton, London S.W. 15, England.

Travel and hotel accommodations may be secured from Thomas Cook and Sons, Ltd. A very few honoraria will be available for travel assistance. For further particulars, address Dr. McClintock or Dr. Taylor.

**The Prevention of Blindness Society of Metropolitan Washington** will hold its 21st Annual Luncheon Meeting, under the chairmanship of Dr. Joseph Dessoff, at the Shoreham Hotel on December 5, 1957. Dr. John Harry King will speak on "Sight Restoration and Eye Banks." Physicians and nurses are cordially invited to attend. Reservations for luncheon at 12:15 p.m. may be made by calling Republic 7-0378. Guests are also welcome to come for the program only at 1:00 p.m.

## GENERAL NEWS

**The Executive Board of the Medical Society of the District of Columbia** held its regular meeting on September 23. The Committee on Medical Ethics and Deportment submitted its opinion to the Board on a matter concerning the Dy-Dee Wash Company of Washington, D. C. This company has been canvassing physicians for a list of expectant mothers and their "expecting month." The form sent to physicians carries the following caption: "This certifies that the following mothers are entitled to complimentary copies of *Baby Talk* magazine." The Committee was of the opinion that it would be unethical, if not illegal, for physicians to provide the information requested on such a form. The Executive Board endorsed the Committee's views.

A letter from Dr. George F. Lull, Secretary of the American Medical Association, was read to the Board. It stated that the Board of Trustees of the AMA had selected Washington as meeting place for its Clinical Session in 1960.

The following committee appointments were presented by President Watts and confirmed by the Board:

Drs. Charles S. White, Sr., and Irving Burka to the Committee on Medical Philosophy.

Dr. John A. Washington (pediatrics) to the Classification Committee.

Drs. Allen S. Lloyd and C. Willard Camalier, Jr., to the Committee for Medicare Program.

Dr. Edward M. Ohaneson to the Committee on Mental Health.

**The National Security Agency** is instituting an employee health program, and in this connection announces the opening for a full-time physician who has completed his internship or residency in surgery or medicine. The starting salary will be $11,395.00 per year for an 8-hour day, 5-day week. The facilities are located adjacent to Fort Meade, Maryland, near the Washington-Baltimore Parkway.

NSA is one of the larger Federal agencies and is charged with vital missions relating to the national defense effort. Its employees are appointed outside the competitive U. S. Civil Service system, but enjoy all of the benefits associated with a career in Federal service, such as sick leave, annual leave, and retirement.

Communications regarding this position should be addressed to Mr. Donald E. Noth, Acting Chief, Procurement Branch, Office of Personnel Services, National Security Agency, Washington 25, D. C.

**Dr. W. Palmer Dearing,** formerly Deputy Surgeon General of the Public Health Service, has been appointed to the newly created post of **Assistant Director for Health in the Office of Defense Mobilization.** He assumed his new duties on October 1. The new position has been established to provide for better coördination of all health activities of the Federal Government which are necessary to achieve and maintain a state of readiness for national defense.

Dr. Dearing, a graduate of Harvard Medical College, has been a career officer of the Public Health Service since 1934. In 1945 he was named Deputy Chief of the Division of Public Health Methods and a year later was named Chief of the Division of Commissioned Officers. For the past nine years he has been serving as Deputy Surgeon General of the Public Health Service.

**Dr. John D. Porterfield** has been appointed **Deputy Surgeon General of the Public Health Service,** succeeding Dr. Dearing. Dr. Porterfield, who has been Assistant Surgeon General, is also a career officer of the Public Health Service and a nationally known public health administrator.

Dr. Porterfield received his medical degree from Rush Medical College of the University of Chicago, and his master's degree in public health from the Johns Hopkins University School of Hygiene and Public Health. After being commissioned in the Public Health Service in 1939, he held a variety of assignments within and outside the Service. In 1947 he was named Director of the Ohio State Health Department, and in 1954 he became Director of the Ohio Department of Mental Hygiene and Correction. He was recalled to active duty in Public Health Service headquarters as assistant to the Surgeon General in October, 1956, and was appointed Assistant Surgeon General in March, 1957.

**Dr. Richard Lambert Masland** is the newly appointed **Assistant Director of the National Institute of Neurological Diseases and Blindness,** a division of the National Institutes of Health, under the direction of Dr. Pearce Bailey.

Dr. Masland received his medical degree from the University of Pennsylvania School of Medicine in 1935. He joined the staff of the Bowman Gray School of Medicine in 1947 as an assistant professor. In July 1955 he took a year's leave of absence from Bowman Gray to accept an appointment as Research Director of the National Association for Retarded Children. In this capacity he organized and directed a nation-wide survey of research facilities and potential in the field of mental retardation.

**Dr. W. Edward Chamberlain,** Professor Emeritus of Radiology at Temple University Medical School and President of the American Roentgen Ray Society, will **head the Veterans Administration atomic medicine program** in Washington, D. C. He will serve as special assistant for atomic medicine to Dr. William S. Middleton, Chief Medical Director of the VA, and as Associate Director of the VA Research Service.

Dr. Chamberlain was director of the Department of Radiology and Professor of Radiology at Temple University Medical School, Philadelphia, from 1930 to February 1957.

**The School of Nursing Education at Catholic University** is offering its students a unique course this fall which will lead to a Master of Science degree in **Cardiovascular Disease Nursing.** The program was made financially possible by a grant from the National Heart Institute. The Washington Heart Association will secure lecturers for the seminars.

The course will be directed by Miss Capitola Mattingly. Miss Mattingly is a graduate of Yale University School of Nursing. She formerly served as mental health nurse for the Arlington County Public Schools, and at one time was chief of psychiatric nursing at St. Elizabeths Hospital in Washington, D. C.

The aim of the new nursing program is to train a corps who will become leaders in training other nurses in the field of cardiovascular diseases. It will include both theory and actual cardiac nursing experience in Washington, D. C. hospitals.

Speakers for the seminars will include Drs. James Watt and William Zukel, of the National Heart Institute; Colonel Thomas W. Mattingly, of Walter Reed Army Hospital; Drs. Andrew J. Prandoni and Bernard J. Walsh, President and Past President, respectively, of the Washington Heart Association; and the following members of the Board of Directors of the Washington Heart Association, who are also members of the District Medical Society: Drs. Charles A. Hufnagel, John O. Nestor, Robert T. Kelley, John A. Reisinger, Josephine Buchanan, Clayton B. Ethridge, John M. Evans, and Frank A. Finnerty, Jr.

Construction of the new **Gorman Diagnostic Building** at the **Georgetown University Medical Center** began September 16. This $3,000,000 structure will be erected at the southern end of the present hospital building and will be connected with the hospital by a passage. The building is named to honor the late Reverend Lawrence C. Gorman, S.J., President of Georgetown from 1942 to 1949. It will house diagnostic, outpatient, and research facilities and will free space in the existing hospital to provide 40 additional rooms for patients.

Funds for the building came from various sources, including the Ford Foundation, the Geschickter Foundation, and Federal grants.

Plans are also underway at Georgetown for the construction of a new **experimental animal house,** which will be located to the south and west of the Medical School, on the site of the smaller building now used for the same purpose.

Approximately 150 dogs will be accommodated in the building. There will be an isolation room for small animals and a compound for monkeys.

Georgetown received a grant of $75,000 from the Public Health Service for this purpose, providing a similar sum would be raised by the University. Aid in raising this matching amount is being received from WARDS ("Welfare of Animals Used for Research in Drugs and Surgery").

**The National Library of Medicine** is now remaining open to readers every weekday until 9 p.m. and on Saturday until 5 p.m. The Library is located at Seventh and Independence Avenue, S.W., next to the Smithsonian Institution. There are ample parking facilities behind the Library building during evening hours.

## PERSONALS

**Dr. Thomas L. Auth** has been appointed **Chief of the Neurology Division at Veterans Administration Central Office** in Washington. He succeeds Dr. Benedict Nagler, who left VA in September to become Superintendent of the Lynchburg Training School and Hospital at Colony, Virginia.

Since 1954, Dr. Auth has been Chief of the Neurology Service at the VA Hospital in Washington. He is certified in neurology by the American Board of Psychiatry and Neurology and is on the teaching staff of Georgetown University School of Medicine. Dr. Auth is a graduate of Georgetown and an Active member of the D. C. Medical Society.

**Dr. Roger Baker,** Professor and Director of the Department of Urology, Georgetown University School of Medicine, was elected a director of the Board of Trustees of the American Urologic Research Foundation during the recent annual meeting of the American Urologic Association.

**Dr. J. Bay Jacobs** was elected Vice President of the American Association of Obstetricians and Gynecologists during the Association's annual meeting in Hot Springs, Va., September 5–7.

**Dr. Michael M. Miller** was elected in August to the National Executive Council of the American Group Psychotherapy and Psychodrama Association.

**Dr. William P. Herbst,** a member of the Board of Trustees of the District of Columbia Division of the American Cancer Society, will serve as one of the judges for the Second Annual Cancer Poster Contest which the Cancer Society is sponsoring for students in the 10th, 11th and 12th grades in the District of Columbia.

The Harry H. Kerr Award of savings bonds, in the amounts of $75, $50 and $25, will be given for the three best posters, and a Certificate of Achievement will be awarded to the three winning schools.

### CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| September 18 | Dr. Thomas A. Wilson | What Every Young Couple Should Know | B'nai Brith Women, Medina Chapter |
| September 22 | Dr. Carolyn H. S. Pincock | Knowing the Whole Child | Sunday School Teachers Association of the Missouri Synod |
| October 1 | Dr. Daniel L. Finucane | Asian Flu | Takoma Park Women's Club |
| October 8 | Dr. Julius Schreiber | Handling Emotional Problems in Family Life | Parent and Child, Inc. |
| October 9 | Dr. Henry P. Laughlin | Emotional Problems of Living | Merrimac Citizens' Association |
| November 2 | Dr. William T. Gibb | Leisure Hours and Health | Fourth Annual Workshop, Capital Chapter, National Secretaries Association |

## CHARLES HAROLD McENERNEY, A.B., M.D., F.A.C.P.

### (1892–1957)

Dr. Charles Harold McEnerney, well known specialist in arthritis and rheumatic diseases, died, October 1, 1957, at George Washington University Hospital. Dr. McEnerney was a pioneer physician in the field of arthritis and rheumatic diseases, having organized the first arthritic clinic in Washington in the old Providence Hospital in 1934.

Born in Derby, Connecticut, December 8, 1892, to Philip and Nora E. O'Dwyer McEnerney, he attended schools in Connecticut and Massachusetts. He received his A.B. degree from Catholic University of America in 1915 and his degree in medicine from Georgetown University School of Medicine in 1919. In 1928 he went abroad to study at the Universities of Vienna and Paris. At the New York Postgraduate Medical School in 1940 and at the Mayo Clinic in 1941, he continued his postgraduate study of arthritis.

From 1930 to 1946 he was Instructor in Medicine and lecturer in arthritis at Georgetown University and a member of the Hospital staff. In 1951 he was awarded the Vicennial Medal for 20 years' service to the University.

Dr. McEnerney was on the staffs of Georgetown and Providence Hospitals, and in charge of the arthritic clinic at the latter from 1935 to 1940. He was formerly a consultant in rheumatology to the National Institutes of Health and had served as rheumatologist at the Fort Myer Dispensary.

He was a diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, and a member of the American Medical Association, the American Geriatric Society, the Georgetown Clinical Society, the Pan American Medical Society, and the Hippocrates-Galen Medical Society. He also belonged to the Columbia Country Club. He had been an Active member of the Medical Society of the District of Columbia since 1920, with the exception of a few years, from 1926 to 1932, when he transferred to Associate while in the Public Health Service. From 1928 to 1941 he was Secretary-Treasurer of the American Society for the Study of Arthritis. He was also a member of the International League Against Rheumatism and the American Rheumatism Society.

Surviving him are his wife, Mrs. Christie C. McEnerney; his mother; and a daughter, Mrs. Nancy Cusick, all residing at their home, 2105 Hillyer Place, N.W. A son, Charles H. McEnerney, Jr., resides at 2795 28th Street, N.W.

## EDWARD CLARKE MORSE, M.D.

### (1890–1957)

Colonel Edward Clarke Morse, retired military surgeon, died, September 15, 1957, at his home, 2023 Massachusetts Avenue, N.W., after an illness of several months. He served in both World Wars and in the interim had practiced in Washington as a specialist in orthopedic surgery.

Colonel Morse, a descendant of early 17th century Marylanders, was born in Washington, D. C., February 27, 1890, to Alexander Porter Morse, attorney and author, and Ellen Maria Clarke Morse. His maternal grandfather was Dr. Daniel Boone Clarke; his paternal grandfather, Isaac Edward Morse, was a member of the House of Representatives from Louisiana before the Civil War.

Colonel Morse attended St. Johns College in Washington, Georgetown Preparatory School, and Princeton University. He graduated in medicine from Georgetown University School of Medicine in 1918. His early medical career was interrupted by service in World War I. He interned at Charity Hospital in New Orleans immediately following the War and a few years later enrolled at New York Postgraduate School for special training in traumatic and orthopedic surgery.

Between the two World Wars he was a member of the Army Reserve, serving part of the time as regimental surgeon for the 121st Engineers of the District National Guard, and battalion surgeon of the 313th Field Artillery. He gave up his private practice in orthopedic and traumatic surgery to return to active duty with the Army before Pearl Harbor.

During World War II, he organized and trained the 40th U. S. Station Hospital, which functioned as an evacuation hospital during the early North African Campaign and later as a clearing station on the Island of Corsica in the invasion of Southern France. He was cited for this service by the Surgeon General of the Army.

After the War he served on the Army Disability

Review Board from 1945 to 1947. During the Korean conflict he was on the staff of Walter Reed Army Hospital until he retired in 1952.

While in private practice in Washington, he was associate orthopedic surgeon at George Washington University and D. C. General Hospitals and on the staffs of Emergency, Garfield, and Children's Hospitals.

Colonel Morse was elected to Active membership in the Medical Society of D. C. in 1922. He transferred to Associate membership in 1951. He was a member of the Sons of the American Revolution and the Chevy Chase Club.

Surviving him are his wife, Mrs. Eleanor Scott Neally Morse, and a daughter, Miss Renee B. Morse, residing at home. He leaves two sons, Alexander B. Morse, at 1303 35th Street, N.W., Washington, and Breton B. Morse, of New York City. A sister, Mrs. Carlos Grevemberg, resides in Washington, and a brother, Walter C. B. Morse, lives in Howard County, Maryland.

### Subdural Empyema—Gallagher and McCoy

(*Continued from page 579*)

5. Preysing, H.: Verhandl. d. Deutsch. otol. Gesellsch., Jena, 1912, **21**, 23.
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11. Ray, B. S., and Parsons, H.: Arch. Otolaryng., 1943, **37**, 536.
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13. Courville, C. B.: Arch. Otolaryng., 1944, **39**, 211.
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### Aortic Homograft—Keshishian and Harrison

(*Continued from page 596*)

blood flow was obtained nor could a catheter be passed proximally. It was thought that the thrombosis which had developed proximally was a result of the slowing of the blood stream at the femoral bifurcation caused by the arteriosclerotic thickening. The skin incision was lengthened, and the aortic bifurcation was resected. The aorta was first encircled and controlled, and then the iliac artery was opened longitudinally. By "milking" and aspiration, several additional soft clots were removed. Once cleaned out this homograft appeared as healthy as when originally inserted 3 years previously. The openings in the vessels were oversewn after irrigation with heparin. A thrombo-endarterectomy was then done on the femoral bifurcation. His postoperative course was uneventful, and he was again discharged from the hospital.

A follow-up examination just prior to submission of this manuscript is satisfactory.

#### Summary

A case of Leriche syndrome with homografting is presented. Although many successful graftings are being performed, the basic disease is never cured. This can manifest itself in many ways. In the present case thrombosis in the graft developed 27 months after surgery, due to progressive narrowing of the femoral artery below the graft by intimal plaques.

### Membership

(*Continued from page 610*)

Benjamin S. Pecson, University of Santo Tomas (Philippine Islands)—1951

*For Resident-Intern Membership*

David G. Dixon, George Washington University—1957
Alden W. Seleman, Georgetown University—1955

### Pharmacy and Medicine—Beckwith

(*Continued from page 615*)

end of the calendar. Our biggest manufacturers in other industries make 15 per cent after taxes. Many manufacturing companies do as well or do better. A pharmaceutical company which annually gambles from 5 to 10 per cent of its sales dollar on research is certainly entitled to do as well if it can.

Now, there are many other problems that irritate you. You will notice that I have not even mentioned the detailman. I have not mentioned the problem of the names of drugs. I have not mentioned the fact that sometimes we fall prey to what looks like good consumer advertising but which has little relationship to the clinical problem. There are many other points, but these seven I think are the critical ones.

There are no easy solutions. A great deal of the trouble stems from the fact that we too are human and that despite the scientific attitudes with which we approach our clinical problems and our marketing problems, the fundamental is still one of human judgment. In this area, perfection is simply too much to ask.

# Book Reviews

**A Woman Doctor Looks at Love and Life.** MARION HILLIARD, M.D. Price, $2.95. Pp. 190. New York: Doubleday, 1957.

This short volume is easy, charming reading and left me with tremendous respect for the author's boundless zest for love and life. Unfortunately, despite the wit and compassion, the sweeping opinions and vividly grim pictures of the normal experiences of womanhood are a bit appalling. This may make lively prose, but how reassuring or useful is it to be authoritatively informed that "femaleness is savage . . . vicious power that can leap out of control without the slightest warning," but that a wife "must lend every effort to pretense" of enjoyment of this same relationship; that after being euphoric or depressed or inwardly cold and convulsed with fear during the first pregnancy, she will find the first baby "a shredding disillusionment" while she is "tired to the marrow, has afterpains, agony from her stitches and aching bones."

This book is not written for any professional group and is not recommended for the wary, worried or neurotic; they may wind up counting their blessings, but more likely they will have their darkest suspicions and worst fears confirmed.

DOROTHY A. STARR, M.D.

**A Textbook of Histology,** 7th edition. ALEXANDER A. MAXIMOW AND WILLIAM BLOOM. Price, $11.00. Pp. 628, with 1082 illustrations, 265 in color, on 631 figures. Philadelphia: Saunders, 1957.

This standard text has earned an excellent reputation among medical students and teachers, as evidenced by the fact that 7 editions have appeared in 27 years. A remarkable fact about this book is that, although Professor Maximow died 2 years before the first edition appeared, his name has been listed as senior author in all editions.

The microscopic pattern of the tissues is presented in such a manner that function is revealed in the light of structure. For this reason the book is particularly valuable to the first year medical student, who must learn structure (anatomy) and function (physiology) concurrently.

In the new edition there has been no significant change in format, divisions, text, or references. But the authors subtly deny that histology is unchanged by including nearly a hundred new photographs, almost all of which are electron micrographs. Presumably the purpose of these is to present additional data to aid in the understanding of cellular function. It is effective when, with the electron microscope, the walls of the glomerular capillary are shown to have tiny apertures admirably suited for filtration. In the case of most other organs, however, greater understanding is not achieved simply by increasing the magnification. When tiny mitochondria are blown up so that they look like egg yolks in a frying pan, and the undulations of a cell membrane resemble a picket fence, it often becomes impossible to recognize tissues and organs, much less understand their function. The beautiful schematic drawings of three-dimensional models are somewhat more effective than the electron micrographs in showing the relationship of function to structure. It is good to see that these have been retained.

An annoying detail in the current edition, and not found in the earlier editions, is the system of numbering the illustrations. Each figure has a hyphenated number, the first part of which corresponds to the chapter number and the second part to the sequence of the figures within the chapter. This is quite confusing when the figure is referred to in the text, as on page 407, where the author notes, " . . . both types of inclusion are readily demonstrable (Figs. 1–12, 3, 1; 1–9)." It is difficult to see just what purpose is served by this system of numbering.

The book is beautifully printed on high grade paper and the excellent illustrations are superbly reproduced.

THOMAS M. PEERY, M.D.

**Battle for the Mind—A Physiology of Conversion and Brainwashing.** WILLIAM SARGANT. Price, $4.50. Pp. 263. New York: Doubleday, 1957.

This book undertakes an examination of the question, "How can people be influenced to believe what may contradict obvious fact" by what the author calls "conversion techniques"; as examples he uses political conversions or brainwashing, dramatic religious conversions, the obtaining of false confessions, and various clinical psychiatric situations. The major thesis of the book is that "when higher nervous systems are intolerably strained by various kinds of stress, 'transmarginal inhibition' supervenes and makes for suggestibility of the victim" in these examples. The author indicates that his observations and conclusions were developed by his rediscovery of the immensely important but hitherto neglected principles of Pavlovian psychology derived from conditioned reflex experiments with dogs. With this as his basis, the author attempts to draw a great number of implications, ranging from the nature of mental illness, the explanation and promotion of physical (shock) therapy in clinical psychiatry, and the nature of dynamic psychiatry to preventive measures for brainwashing.

On the face of it, the main thesis is so patently obvious in its own limited way that it can hardly be questioned. One does not need to know Pavlov to be aware of the bombarding effect of TV commercials or the salesman's trick of subjecting the prospective customer to prolonged stress in order to increase suggestibility. It is not

*(Continued on page 46)*

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## Book Reviews

(*Continued from page 45*)

with the thesis that this reviewer concerns himself, but rather with the "so what" that is involved in devoting a book and number of wide implications to this thesis.

Although banal, it is still painfully true that our knowledge of physical science far overshadows the scientific study of man's relationship to man. Ordinarily, then, any sincere attempt to explore such social fields should be applauded. But any reflection and contribution must be undertaken with some sense of the humanness of the problem and with some appreciation (if not knowledge) of the complexity of the subject, including an awareness of people; how, why, and what they do to each other; and the origins, uses and kinds of pathological thinking, in addition to a recognition, at least, that there are sciences which deal with interpersonal, sociologic and historical data. Thus, it is not likely that any new gimmick, such as 'transmarginal inhibition,' can solve the world's problems, but rather that any clues as to what man is about will come from observations and data which are carefully scrutinized by thoughtfulness and a knowledge of our complexities.

This viewpoint is foreign to Dr. Sargant. A prominent British psychiatrist, regarded with prestige and official recognition by his colleagues, he occupies a position of eminence. This means that this book will attract attention in both lay and scientific circles and therefore deserves a skeptical examination. The author has previously written "An Introduction to Physical Methods of Treatment in Psychiatry" and also is reputed to be the author of an anonymously written series of articles in a popular U.S. monthly in which physical "shock" treatments were compared to religious experiences and also extolled as the only valid starting point for psychiatry of the present and future. He, therefore, starts off with a particular orientation, called "mechanistic"; i.e., human unhappiness or deviation from a supposed norm is simply a matter of disturbed physiology or chemistry which can be rectified by mechanical means. With this viewpoint the author attempts to examine various highly complex human—both individual and group—phenomena.

From the standpoint of data, little is presented that has not been better done by journalists or historians, and the data bear little relationship to the conclusions; e.g., an interesting statement, perhaps true, that Communist brainwashing is directly and intentionally derived from Pavlovian psychology was disappointingly documented, but vaguely, in only one instance. His writing is prolix, meandering, sprinkled with authoritative statements, appearing to be facts, which are really highly debatable upon closer examination, and the kind of logic used to develop conclusions was either too subtle for me or else nonexistent. Even the discussions of brain physiology as applied to human thinking and behavior,

## Book Reviews

(*Continued from page 46*)

for which one could make a case if one were so inclined, are done without precision or regard to fact, the author flitting from "focal brain stimulation" to emotions in a manner which is either contradicted by or simply not upheld by our present knowledge of neurophysiology. Dr. Sargant's contention that the contribution of Pavlovian psychology has been overlooked, and when rediscovered and given its proper place, will revolutionize our thinking about human behavior (especially in psychiatry and psychoanalysis) is overdrawn. Some of those valid ideas obtained by Pavlov are not necessarily contradicted by dynamic psychiatry; they simply stand in relation to psychoanalysis in terms of complexity as one orange equals one orange stands in relation to $E = mc^2$ in the field of mathematics. But in my opinion, all of these fallacies are common when attempts are made to deal with human thinking and behavior by an exclusively mechanical approach. Also common, for explainable reasons, is the author's arrogance and lack of fairness when he attempts to explain and attack psychoanalysis, because it is apparent that he is appallingly ignorant about the aims and methods of modern dynamic psychiatry.

While the subject matter of this book could have been intriguing and usefully developed, Dr. Sargant, in his "Battle for the Mind," won no victory with me.

MAXWELL BOVERMAN, M.D.

**A Manual of Pharmacology and Its Applications to Therapeutics and Toxicology,** 8th edition. TORALD SOLLMAN, M.D. Price, $20.00. Pp. 1535. Philadelphia: Saunders, 1957.

This is the eighth edition of this well known textbook. The author's stated purpose is that the manual furnish a guide through the confusing complexities of the ever-increasing volume of drug materials. This purpose has been carried out to a high degree.

Although the book is not divided into sections, the introductory portion of this Manual concerns itself with a succinct discussion of the general principles of pharmacology and toxicology. This introduction is immediately followed by the discussion of specific groups of foods and drugs. There is little apparent attempt to follow an overall plan of order for the groups. Where so many groupings are necessary perhaps this is not possible. However, the paragraphs within the specific groups are orderly and very easily identified. The index is complete and makes up for any difficulties encountered in using the Table of Contents.

The eighth edition of this popular textbook certainly has been brought up to date and can be used to advantage both by the practitioner of medicine and the student of pharmacology.

CHARLES S. IRELAND, M.D.

(*Continued on page 50*)

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[1] Nichols, R. L. and Finland, M.: J. Clin. Med. 49:410, 1957.

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## Book Reviews

(*Continued from page 47*)

**The Changing Patient-Doctor Relationship.** Martin G. Vorhaus, M.D., F.A.C.P. Drawings by A. Birnbaum. Price, $3.95. Pp. 310. New York: Horizon Press, 1957.

Psychosomatic Medicine is dramatized here in an unusual and interesting way for the lay reader. Although the book is written more directly to the patient, it should be of interest to almost any physician in the active practice of medicine.

The titles of the first three chapters, "The Patient, How he became one," "The Patient, What he was before he became one," and "The Doctor, Why he became one," are indicative of the approach taken by the author in putting together an extremely logical analysis of the patient-doctor relationship. He stresses the ever-increasing necessity on the part of the physician to understand not only the patient—his drives, his motivations, his emotional needs, and all the other facets of his psyche which have made him a patient—but also to understand fully these same things in himself. (Dr. Vorhaus remains silent on the question of full analysis for the doctor, however!) In no other way, he feels, can the needs of the patient be completely met and satisfied.

Dr. Vorhaus follows this with chapters on the establishment of secure and adequate rapport between patient and doctor, the doctor's part in building this "bridge," and the necessary psychologic tools to be used in therapy. Here he draws upon a vast storehouse of knowledge and learning, and a rich and extensive clinical experience. Here is a treat for the intellect.

The entire second half of his book is devoted to closely detailed interviews taken from 5 case histories in which are illustrated the use of these "tools" in the management of peptic ulcer, colitis, hypertension, and obesity. He feels that there is a significant percentage of failures in the clinical management of these illustrative conditions and has chosen them because of their frequency of occurrence and of their tendency to recur. In this reviewer's opinion, however, there must also be a high percentage of failure in the psychotherapeutic management of these diseases by physicians *not* well trained in psychiatry and psychiatric technics. Moreover, much harm could conceivably be done by physicians not so highly skilled as Dr. Vorhaus, in whom, obviously, a keenly analytical mind and retentive memory are combined with sound psychiatric experience. The average medical practitioner would not and could not possess all these talents, nor would he have the time or his average patient the financial means to work out with such completeness the psychosomatic aspects of each illness for which he is consulted.

Dr. Vorhaus expresses great concern over the large number of frustrated patients leaving the medical profession every year seeking "understanding, coöperation, and help" from other self-styled "healers," and he feels strongly that this is an indictment of the doctor. He says, "Whether he was right or wrong in going to the doctor for assistance, whether he really needed medical care is not the point. He certainly wanted a measure of understanding from the physician and a belief that his doctor would try to assist him and would give him assurance of his sympathetic coöperation."

These are good points. To many lay readers, on the other hand, Dr. Vorhaus' case histories could easily oversimplify these complex disease processes and their treatment. Perhaps this could even do harm in adding new members to the cult of self-diagnosis and treatment, or to the group of patients who seek medical care late in the course of a serious illness, largely because their reading on medical subjects has made them too eager to dismiss their symptoms as "probably psychosomatic."

Dr. Vorhaus is lucid and direct in expressing himself, and provocative of thought. "Yesterday's doctor is as obsolete as the ivory tower in which he practiced, fortified by Latin names for diseases and for drugs." Anxieties, he believes, "have displaced the common cold as man's most frequent malady." Hence the need for psychotherapeutic guidance is increasing, and with more enlightenment of the public in matters psychologic, the demand for this service will correspondingly increase.

The purpose of his book, he says, is to contribute to this growing awareness of the public.

Edward W. Nicklas, M.D.

**Ciba Foundation Symposium on the Chemistry and Biology of Purines.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $9.00. Pp. 327, with 124 illustrations and structural formulae. Boston: Little, 1957.

This volume contains the papers and discussions presented during May, 1956 at a Symposium on Purines. The participants included many of the leading figures in purine research, and, as is usual in the Ciba Symposia, the informal discussion which is printed is as valuable as the more formal presentations.

The papers are particularly rich in reviewing current synthetic and physicochemical aspects of purine chemistry. Excellent reviews on the biosynthesis of these compounds and their derivatives are included from those laboratories which have been most productive in this field of research. The clinician will be interested in discussions of folic acid participation in purine synthesis, purine analogues of vitamin $B_{12}$, 8-azapurine and 6-mercaptopurine. A discussion of puromycin, an antibiotic showing promise as an agent against helminths and protozoa, appears of especial interest.

Because of the concise nature of scientific reviews the material has been composed in somewhat muscular, although clear, prose. The wide variety of subject matter reviewed suggests this volume as source material for those interested in this expanding field.

Ruth K. Jakoby, M.D.

MEDICAL ANNALS
*of the*
DISTRICT OF COLUMBIA

VOLUME XXVI *December*, 1957 NUMBER 12

# DIURETICS AND RENAL DISEASE*

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THE ABILITY to manipulate salt and water excretion is usually of some importance and may become essential to the management of patients with renal disease. The most effective form of such manipulation has been the careful regulation of diet and the precise prescription of administered fluid and electrolytes creating an artificial metabolic environment. If this can be made sufficiently static, the organism lessens its dependence on the marvelously flexible renal homeostatic mechanisms and is able to survive with physiologic equipment rigidified by the disease process. This is analogous to putting a maniac in a sanitarium. It may not alter the disease but it renders less frequent the encounters with adversity. The patient, however, seldom really understands this form of management and knows only whether he feels better or worse and how much trouble dietary changes are causing him.

It is understandable, therefore, that physicians have long and eagerly sought alternative or direct means of manipulating the environment by altering renal function with drugs that have come to be known as "diuretics." This term is apt (Gr. *dia*—"through" plus *ourein*—"to make water") and well defined ("tending to increase the secretion and discharge of urine"),[1] but it fails to convey the multiplicity of renal mechanisms available for increasing the discharge of urine. These are traditionally classified into 3 basic types:

1. *Osmotic diuresis* is increased urine volume due to the presentation of more solute and water to the distal nephrons. This may be achieved by (a) raising the concentration of osmotic active physiologic substances in the glomerular filtrate (e.g., urea, glucose, hypertonic saline), (b) administering osmotically important foreign substances (e.g., Mannitol), or (c) blocking the proximal tubular reabsorption of physiologic substances (e.g., Phlorizin on glucose, organic mercurials on sodium and chloride, acetazoleamide on sodium and bicarbonate).

2. *Filtration diuresis* is an increased urine volume due to the elevation of glomerular filtration rate. Clinically, this is usually accomplished by (a) increase in cardiac output (e.g., posture in syncope, digitalis in congestive failure, hydralazine in hypertension), (b) elevating the

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* The work of this laboratory has been supported by grants from the John A. Hartford Foundation, the National Institutes of Health, the Washington Heart Association, and the Georgetown University Kidney Research Fund.

hydrostatic pressure (e.g., transfusion in hypovolemic shock pressor agents in "warm shock"), or (c) inducing renal vasodilatation (e.g., expansion of extracellular fluid space, injection of pyrogens, xanthine diuretics).

3. *Water diuresis* is the increase in urine volume due to a reduction in distal water reabsorption. This has been produced by (a) impaired production of antidiuretic hormone (e.g., diabetes insipidus, hypnosis, conditioned reflex), (b) physiologic suppression of antidiuretic hormone production (e.g., drinking water, alcohol, injection of glucose, etc.), or (c) impaired tubular response to antidiuretic hormone (e.g., nephrogenic diabetes insipidus, recovery phase of tubular necrosis, nephrocalcinosis, etc.). Theoretically this mechanism is available for specific drug blockade, but no satisfactory agent has thus far been found.

The use of diuretics in patients with renal disease involves a host of special considerations and requires a broad understanding of the physiologic mechanisms involved. Fluid retention in the nephrotic patient may defy any tubular blockade; low filtration rates and hyponatremia may so reduce the filtered load of salt that blocking drugs become impotent; fixed blood vessels may defy vasodilatation; metabolic acidosis and hypoalbuminemia may completely negate otherwise effective drugs, and the mildly uremic patient may present serious drug reactions or intolerance to regimens that are clinically successful in the cardiac or cirrhotic patient.

The present report will review briefly some of the problems of diuresis in renal disease with particular emphasis on a new blocking agent, chlorothiazide, (Diuril*), which may offer particular advantage in certain types of renal disease.

## CLINICAL MATERIAL

For purposes of diuresis, renal diseases may be divided into the simple categories of:

1. Salt retention without gross impairment of glomerular filtration rate, for example, nephrotic syndrome, membranous glomerulonephritis, mild preëclampsia, aldosteronism, etc.
2. Salt retention with moderate impairment of glomerular filtration, e.g., severe preëclampsia, nephrotic stage of subacute and chronic glomerulonephritis, amyloidosis, Kimmelstiel-Wilson's disease, pyelonephritis, acute glomerulonephritis, lupus nephritis, etc.
3. Marked reduction of glomerular filtration, with or without clinical edema (often a function of diet), where increased urine flow may enhance the urea clearance and reduce azotemia, may aid in the control of hypertension, and may help in the defense against secondary infection. Such conditions are often encountered in chronic pyelonephritis, chronic glomerulonephritis and severe nephrosclerosis.
4. Special conditions, for example, polycystic disease, uric acid obstruction (gouty nephritis), etc.

All patients in this study have been under continuous care, and all electrolyte and special studies have been performed in the Renal Laboratory of Georgetown University Medical Center. Details of balance procedures, methodology, and precise data on some of the patients reviewed here have been presented in a previous report from this Laboratory.[2] Diuril was given in doses of 5 mg. per Kg. of body weight every 6 hours or 10 mg. per Kg. every 12 hours. Parenterally, it was given as a slow intravenous injection at 3 mg. per Kg. in a single dose or at suitable intervals for a particular study.

## NEPHROTIC SYNDROME

The trained physician should regard edema as a secondary manifestation of the nephrotic syndrome and should never focus on it as a therapeutic end point. However, as long as edema is palpable, anticosmetic, and the most common chief complaint, it will be regarded as important by the patient. Both confidence in the physician

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* Kindly supplied by Dr. John Beem of Merck, Sharp and Dohme, West Point, Pa.

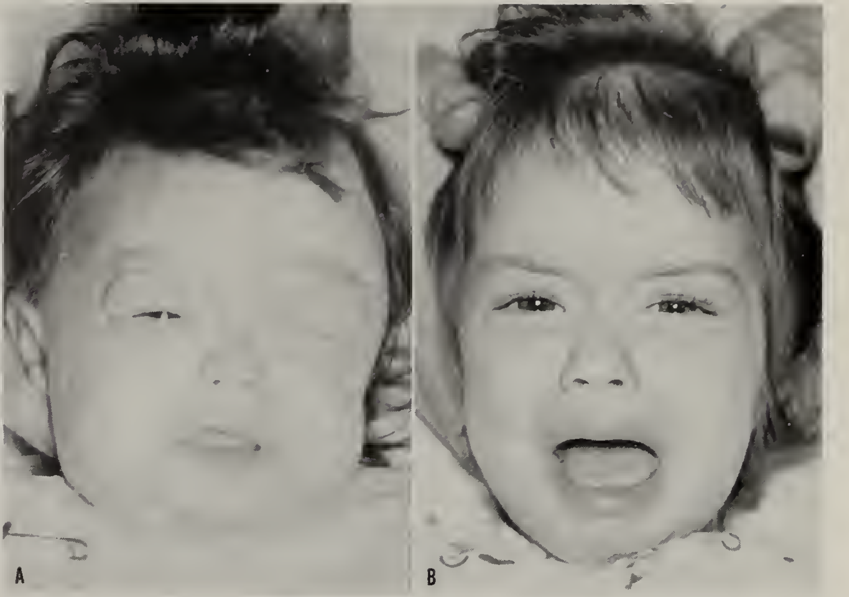

FIG. 1. (A) Marked periorbital and palpebral edema in a 15-month-old girl with acute glomerulonephritis and nephrotic syndrome (case 1). The patient had increased her known dry weight by 60 per cent. (B) Same patient 8 days later after a diuresis obtained by elevating the serum albumin and giving 200 mg. per day of intravenous chlorothiazide.

and enthusiasm for more strenuous measures are best gained by concrete evidence of the physician's ability to control edema at the various stages of the disease processes. Severe orbital edema may cause mechanical blindness and terrify the patient (figure 1), and fluid retention can be a threat to life when it progresses to pulmonary edema, pleural effusion, edema of the glottis, or edema of the gastrointestinal tract. The mechanism of nephrotic edema has received considerable investigation, and particular attention has been given to the role of (a) protein loss, decrease in plasma volume and fluid shifts,[3, 4] (b) salt-retaining hormones (aldosterone),[5] and (c) antidiuretic substances.[6] The necessity of seeking an etiologic diagnosis before treating the nephrotic syndrome has previously been emphasized.[7]

Chlorothiazide has been able to produce a substantial diuresis in 9 of 16 courses given to 14 studied patients with nephrotic syndrome of varying etiology. Satisfactory weight control has been established in several of these patients by continuous administration of the drug on an intermittent schedule (2 days on, with the interval off determined by the rate of basal weight gain). Substantial weight losses have also been achieved in several additional patients treated on an outpatient basis without electrolyte studies. In general, chlorothiazide has been found to be of distinct value in nephrotic patients in the following conditions:

1. Control of the edema in the mild nephrotic who is not on steroid therapy.

2. Control of additional weight gain during the first 2 weeks of ACTH or steroid administration. Although this problem has been managed in the past with extreme sodium restriction and potassium administration, such measures are difficult in young patients and may lead to anorexia. Chlorothiazide makes dietary control less critical. While the patient is receiving steroids most of the chloride in the diuresis may appear as the potassium salt, and hypokalemia and alkalosis may supervene unless potassium is added to the infusions or diet.

3. Potentiation of withdrawal diuresis in refractory patients. An occasional patient is unable to achieve a steroid-induced or steroid-withdrawal diuresis. Chlorothiazide has been effective after the withdrawal of exogenous steroids. The effect begins with an abrupt shift of the dominant chloride salt in the urine from potassium to sodium.

4. Periodic weight control during the maintenance steroid administration. Such weight gains are usually due to dietary indiscretions or

necessary increases in the steroid dosage. Chlorothiazide blockade can oppose the salt retention of mineral corticoids and has been of greatest practical value in patients on high dosage and those forced to eat in restaurants and institutional dining rooms where dietary restriction is difficult if not impossible. Many of these clinical points are brought out in the brief histories of cases 1 and 2 from our nephrotic series.

Acetazoleamide has, in our experience, been able to double sodium excretion in some nephrotic patients with very low sodium concentrations in the urine (circa 10 mEq./l). However, true clinical diureses have been disappointingly rare. Rapid tolerance develops with depletion of serum bicarbonate, and loss of potassium in the urine also occurs. We have found only limited applications for this drug for the fourth purpose listed above, that is, weight control during maintenance. Since we have previously demonstrated[2] that a sodium bicarbonate diuresis can be superimposed on the saluresis of chlorothiazide, there is a rational basis for combining carbonic anhydrase inhibitors with chlorothiazide in refractory cases.

We have not personally employed mercurial diuretics in nephrotic cases and have considered them contraindicated in active renal disease. This is based on the disproportion of deaths due to intravenous mercurials that have occurred in nephrotic patients,[8, 9] and our own experience with tubular necrosis, oliguria, proteinuria, hematuria, and cylindruria after mercurial diuretics in nephrotic patients who were referred to us.

Some nephrotic patients with marked hypoalbuminemia have failed to respond to any diuretic regimen without expansion of their plasma volume. For this purpose we have used salt-poor albumin, plasmate, reconstituted plasma, and dextran. Others have used acacia, gelatin, globin, polyvinyl pyrrolidine, etc. Salt-poor concentrated albumin has been the preferable agent in our own experience. A manufacturer who could make dextran without salt might do a real service in this field. In most nephrotic patients there is a critical level of serum albumin below which no diuresis can be achieved with any agent. This varies with the individual but seems to be in the area of 1.5 to 2.5 Gm. per 100 mg. Below this level diuresis with chlorothiazide may occur but cannot be expected. Combinations of chlorothiazide and albumin have been effective in patients in whom neither agent alone had been successful. Patients who elevate their serum albumin or raise their glomerular filtration rate on steroids may either initiate or enhance their diuretic response to chlorothiazide as a result of such changes.

Finally, it should be reëmphasized that many events in the clinical course of nephrotic syndrome (e.g., bed rest, digitalization, change in diet, and respiratory infections) may initiate diuresis, and meticulous control is necessary to avoid false conclusions from clinical data.

## PREGNANCY, PREËCLAMPSIA AND FUNCTIONAL EDEMA

It is common clinical experience that pregnant women usually have some degree of salt retention which may vary from pitting edema of the ankles at the end of the day to massive anasarca. Careful study of such patients, however, has revealed a disturbing number who have, in fact, membranous glomerulonephritis, nephrotic syndrome, chronic glomerulonephritis, pyelonephritis or collagen disease, all of which may be aggravated by, or be diagnosed first during pregnancy. One of our patients has had 4 nephrotic syndromes with massive anasarca during 4 successive pregnancies with normal urines during nonpregnant intervals. Renal biopsy revealed glomerulonephritis.

Bed rest, elevation of the legs, restriction of salt, or administration of potassium, acidifying salts, oral magnesium sulfate, xanthines, exchange resins or acetazoleamide have all been successful in the management of excessive edema of pregnancy. Organic mercurials have generally been ineffective. The majority of such patients do not need diuretics, and we prefer to do the simple things first. Preliminary results would suggest that chlorothiazide is a superior agent for control of edema in pregnant patients who need diuretics. This aspect is receiving more intensive study from other investigators.

Preëclampsia offers the two-fold problem of fluid retention and hypertension. The danger of overlooking primary renal disease, especially pyelonephritis, needs reëmphasis in this group.[10] It has been our continued experience that enthusiasm for diuretics may dull the zest for diagnosis. In a few patients unresponsive to milder measures, diuresis with chlorothiazide has been achieved. Freis and Wilson[11, 12] have already reported on the effect of chlorothiazide in potentiating antihypertensive drugs. We have had similar experience in patients with hypertension and mild renal disease. Combinations of chlorothiazide and rauwolfia, or rauwolfia and hydralazine, have enabled reduction in dose or removal from ganglionic agents—a desirable goal in patients with renal disease. Chlorothiazide would therefore seem to offer a double action in preëclampsia and is under further investigation. Finnerty and Bucholz[13] have used chlorothiazide in over 100 cases of preëclampsia and find that the need for the dosage of antihypertensive drugs has been reduced by its use.

Functional edema has been described in premenstrual tension, anxiety states, in nervous young women, and as a variant of angioneurotic edema. Conn, Luetscher and others have pointed out instances in which the type of edema was the result of functional hyperaldosteronism. Restriction of sodium intake would theoretically be expected to worsen this situation by increasing the output of aldosterone.[14] Such patients have, however, responded clinically to salt restriction and potassium administration. The psychologic effect of strict dietary regimens cannot be discounted in this type of patient. Often, however, weight gain can be demonstrated with salt feeding, and we have used a hypertonic saline recovery test to try to separate this type of patient from those who just think they have edema. Chlorothiazide would seem to have a theoretical advantage in controlling edema while permitting a normal dietary intake, but our own clinical experience is at present inconclusive.

### AMYLOIDOSIS

Patients with nephrotic syndrome or edema produced by renal amyloidosis usually have diminished filtration rates at the time of diagnosis. Few have been particularly difficult to manage because of a general refractoriness to all forms of therapy. We have 1 patient with amyloid nephrosis in whom chlorothiazide failed to produce a diuresis when both her glomerular filtration rate and serum albumin were at low levels. Despite anasarca and full doses of chlorothiazide the sodium excretion never was above 5 mEq. per 24 hours. However, prednisolone and salt-poor albumin produced a marked improvement in renal function and the patient achieved a massive diuresis. She has been maintained within a 6 Kg. weight variation for 9 months on the intermittent use of chlorothiazide. Cessation of the use of the drug always results in the accumulation of edema. The clinical details are summarized in case 3.

### KIMMELSTIEL-WILSON'S DISEASE

Patients with the clinical syndrome associated with intercapillary glomerulosclerosis usually have moderate reduction of filtration rate when they are first diagnosed. In the early stages they may manifest edema only on excessive salt intake, or they may develop a full nephrotic syndrome.[7] Later, as marked renal failure and hypertensive heart disease supervene, they become serious problems in the management of the edema. Anuria following mercurial diuretics has been seen in 2 patients with this disease. Acetazoleamide is rarely effective because of the usual presence of some degree of metabolic acidosis.

We have used chlorothiazide in 6 patients in all stages of this syndrome with diuresis ranging from 5 to 35 pounds. There have been no side-effects, and the drug is considered a particularly valuable adjunct in the management of Kimmelstiel-Wilson's disease. Several patients have also had reductions in hypertension. One elderly patient with the nephrotic syndrome had become completely refractory to all previous therapy including ammonium chloride and mercurials. Her weight fell from 130 to 118 lbs. during 7 days of chlorothiazide therapy. Another patient without a full nephrotic syndrome was a juvenile diabetic with dwarfism, severe retinitis proliferans, cataracts, glaucoma, and moderate renal failure with the blood urea nitrogen ranging from 35 to 50 mg. During a 3-day control period after dietary equilibration his average daily excretion of electrolytes was 5 mEq. of Na, 52 mEq. of K, and 24 mEq. of Cl. During 5 days of chlorothiazide administration the average daily excretion was 27 mEq. of Na, 68 mEq. of K, and 86 mEq. of Cl. The body weight fell from 118 to 112 lbs. Intraocular tension, which had risen to 77 and 44 in the control period, fell to 48 and 26 on the sixth day of treatment and there was a decrease in ocular pain. The addition of dichlorphenimide (an experimental carbonic anhydrase inhibitor), 100 mg. every 6 hours, did not enhance sodium or chloride excretion but significantly increased potassium loss to 35 mEq. per day during 6 days of treatment.

### ACUTE GLOMERULONEPHRITIS

Subcutaneous edema of low protein content, acute pulmonary edema, acute congestive heart failure, and nephrotic syndrome are all seen in acute glomerulonephritis and have been discussed in previous communications.[15, 16] Bed rest, digitalization, salt restriction, and rauwolfia will suffice for many such patients. Mercurial diuretics are strongly contraindicated. Chlorothiazide has been used successfully in 3 patients with acute glomerulonephritis but has not been successful when the filtration rate or the serum albumin concentration is markedly reduced. The principles are illustrated in case 1, in which both acute nephritis and nephrotic syndrome were present.

### LUPUS NEPHRITIS AND NEPHROSIS

The management of salt retention becomes important in 3 aspects of lupus nephritis: inflammatory lesions of the glomerulus, nephrotic syndrome, and accumulation of edema during maintenance therapy with adrenal steroids. Therapeutic considerations are similar to those mentioned under nephrotic syndrome and acute glomerulonephritis. Chlorothiazide has been found valuable in all 3 aspects. In 1 previously reported case,[2] a 50-lb. diuresis in 9 days was achieved in a woman with lupus nephrosis. This patient has been maintained completely edema-free for 7 months on maintenance steroid and occasional doses of chlorothiazide.

### URIC ACID NEPHRITIS

In gouty nephritis or obstruction by uric acid it is desirable to alkalinize the urine and increase urine volume. This is usually accomplished by water diuresis and the administration of sodium bicarbonate. In 1 patient with severe gouty nephritis, congestive heart failure, edema and azotemia, chlorothiazide and carbonic anhydrase inhibitors were used in conjunction with other measures. Large amounts of sodium bicarbonate could not be used because of the congestive failure. Weight loss, alkalinization of the urine, control of edema and reduction in azotemia were achieved by the combination of drugs in this case.

### POLYCYSTIC DISEASE

Polycystic disease usually becomes symptomatic in the fifth decade of life with proteinuria, hypertension, mild salt retention and enlarging cysts. Earlier difficulties may be encountered during pregnancy. The most aggravating clinical problem in these cases is recurrent abdominal pain and heaviness and dragging sensations which are believed due to enlarging cysts. Symptoms of hypertension may also be present. Many such patients have a mild hyperchloremia in the range of 108 to 114 mEq./l. Chlorothiazide has been used successfully in 2 cases of polycystic disease with gratifying control of symptoms. Details are summarized in cases 4 and 5. In a third case of severe uremia and polycystic disease no significant diuresis was obtained, but the sodium and chloride concentration in the urine was increased and a serum hyponatremia produced. The serum chloride concentration has been reduced in all patients with hyperchloremia and this may offer a basis for selection. The use of carbonic anhydrase inhibitors in cystic disease has been previously reported.[17]

### Chronic Renal Failure

We have long realized that at a certain stage of degenerative renal disease the tubules become more of a liability than an asset. When enough tubular damage is present to produce a potential or actual salt-wasting syndrome, patients with uremic syndromes may show marked clinical and chemical improvement when the patient is loaded with salt or sodium and can respond with an osmotic diuresis and increased urine volume. This was strikingly demonstrated in a patient with hydronephrosis in a unilateral kidney whose urine volume ranged from 400 ml. to 6,000 ml. on salt intakes varying from 1 to 40 Gm. per day. After being in terminal uremic coma the patient has been maintained in an ambulatory status for over 2 years by simple salt-loading and a nephrostomy tube. Similar results have been achieved in milder degrees of obstruction. The clinical problem is a common one and is encountered eventually in most cases of chronic pyelonephritis, chronic glomerulonephritis, advanced nephrosclerosis and other types of degenerative renal disease.

Our original interest in chlorothiazide came from this group of patients and from our continuing search for a tubular blocking agent which might produce an artificial salt-wasting syndrome as the basis for a continuous osmotic diuresis. Most known diuretic agents in any dosage become ineffective when the filtered load of sodium is reduced by a substantially impaired glomerular filtration rate. Chlorothiazide has been found to be more effective than other agents, but the overall results have been thus far disappointing. The drug has been given to 19 selected patients of this type with varying etiologies of renal disease. Eleven patients showed no change in weight, urine volume or azotemia. In a few instances the sodium and chloride concentration in the urine was slightly increased. In 8 patients moderate diuresis of 2 to 8 lbs. was achieved. Hypertension in some cases was ameliorated. All patients in this group had a blood urea nitrogen between 40 and 85 mg. Good response in this type of patient despite marked reduction of filtration rate is illustrated in the electrolyte study shown in figure 2.

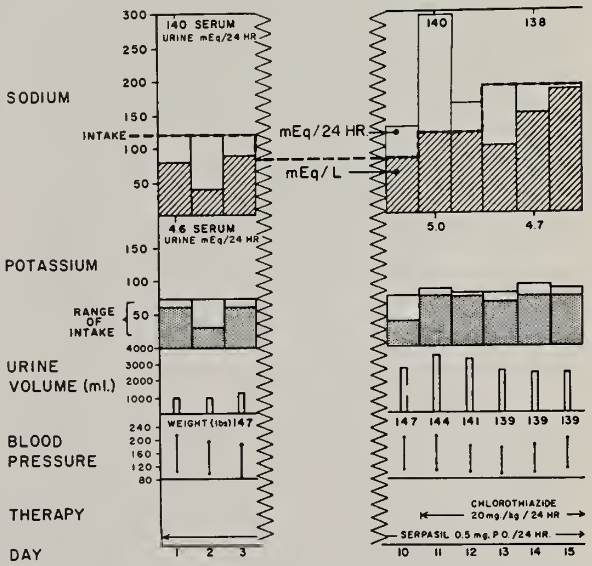

Fig. 2. Electrolyte excretion study in a 67-year-old patient with recent onset of hypertension, mild edema and azotemia. Creatinine clearance was 30 in 1 kidney and 4 in the other. The Howard test was negative. Biopsy revealed severe nephrosclerosis. Chlorothiazide given on the eleventh day produced a negative sodium and water balance, weight loss of 8 lbs., and decrease in blood pressure. Urine collections were inadequate during the interrupted period when cystoscopy and renal function tests were being performed.

## ILLUSTRATIVE CASES

**Case 1.** The patient was a 15-month-old baby girl admitted for anasarca and oliguria of 2 weeks' duration. This child had been well until 6 weeks previous to admission when she had a throat infection for which no antibiotics were given. Three weeks later she developed periorbital edema, oliguria, hematuria, albuminuria, reversal in A/G ratio, hypoalbuminemia, hypercholesterolemia, and positive urine and throat cultures for beta and hemolytic streptococcus. She was treated with penicillin, Chloromycetin, diuretics, and Meticorten, 20 mg. per day for a 10-day course, without any noticeable improvement. Her weight during this period increased from 22 to 30 lbs. and the anasarca was massive, involving all body cavities and subcutaneous tissue. Orbital edema was so marked that it produced mechanical blindness. When 2 units of albumin was given the child's blood pressure rose precipitously and early signs of encephalopathy were present.

On admission the physical examination revealed a markedly edematous, irritable child with a blood pressure of 170/100 and pulse rate of 120 per minute. The palpebral fissures were completely closed by massive edema (figure 1-A). The remainder of the examination was normal except for ascites and massive edema.

The urine showed albuminuria, hematuria, and 15 to 20 red blood cells and 3 to 5 white blood cells per high power field. Hyaline casts with fatty inclusions, waxy, granular and hyaline casts, uric acid crystals, degenerative renal epithelial cells, free fat droplets, oval fat bodies, and doubly refractile fat bodies were seen in the urinary sediment. Quantitative protein excretion was 7.3 Gm. per 24 hours. The antistreptolysin titer and the LE prep were negative. The platelet count, which was 761,000 on admission, rose to 1,072,000. The sedimentation rate was 68 mm. per hour observed and 24 mm. per hour corrected for a hematocrit of 25. The blood urea nitrogen was 35 mg. on admission and rose to 75 mg. by the seventh hospital day. Only 30 c.c. of urine was collected in the first 3 hospital days. The serum protein was 0.4 mg. per cent, the globulin 3.4 Gm., and the cholesterol 600 mg. per 100 ml. of blood.

The patient was placed on a salt-free glucose intake and given ACTH, 60 units per day. She was too weak to permit total urine collections, but control urine contained 8 mEq./l of sodium and 88 mEq./l of potassium. She was started on chlorothiazide, 200 mg. per day, intravenously placed into her infusions. The potassium excretion rose to 118 mEq./day, but there was no significant increase in sodium or urine volume during the 4 days of this therapy. Total weight loss up to this point was less than 2 lbs. Although some serum albumin had been given, the concentration remained less than 1.5 Gm. per 100 ml. of blood. At this point, on the ninth hospital day, she was given 2 units of albumin which raised the serum concentration to 2 Gm., and a prompt diuresis ensued with urine volumes rising to 1,480 c.c. per day and sodium concentration in the urine rising to a high of 64 mEq./l. A total of 146 mEq. of sodium and 19 mEq. of K were excreted on the eleventh hospital day. There was a marked loss in body weight from 29 lbs. before the use of Diuril to 19 lbs. after diuresis. Her total weight loss represented 45 per cent of her admission body weight (figure 1-B). It is worthy of note that with the onset of diuresis there was an abrupt reversal to sodium chloride from potassium chloride in her urine. Before potassium replacement could be adequately calculated her serum K had fallen to 1.8 mEq./l but was rapidly restored to 4.4 by potassium chloride supplements in her infusions.

Comment. This patient illustrates an instance of nephrotic syndrome in acute glomerulonephritis with a failure to control progressive anasarca when steroids alone, albumin alone, chlorothiazide alone, and other measures were tried. However, when she was prepared with steroids, had her serum albumin elevated above 1.5 Gm., and was given chlorothiazide, a prompt and massive diuresis ensued.

**Case 2.** The patient was a 49-year-old Negro who entered the hospital for evaluation of edema of the ankles and progressive anasarca which began 6 months previous to admission. There was no antecedent disease. During this 6 months the patient had been treated intermittently with mercurial diuretics without any substantial decrease in the amount of edema. One year prior to admission he had weighed 147 lbs. The maximum weight achieved during edema had been 170 lbs. His weight at home before entering the hospital was 151 lbs.

On admission the pulse rate was 84, the respiratory rate 20, and the blood pressure 150/100. There was 3 plus edema of the ankles and 1–2 plus edema of the skin all the way up to the mid-thoracic region. There were bilateral pleural effusion, ascites, and a midline scar from a paracentesis which had been done 1 week previous to admission. The urinalysis was abnormal, with marked albuminuria, hematuria, pyuria, cylindruria, oval fat bodies, doubly refractile fat bodies, fatty, waxy casts, and renal tubular epithelial cells. Quantitative protein excretion was 4.2 Gm. per 24 hours, and the Addis count was markedly abnormal in red blood cells, casts, and white blood cells. The blood urea nitrogen was 16 mg. and the total protein 3.2 Gm. with 1.0 Gm. of albumin and 2.2 Gm. of globulin. The cholesterol was 300 mg. per 100 ml. of blood. The antistreptolysin titer was normal. The endogenous creatinine clearance revealed values of 104 and 102 ml. per minute. Phenolsulfonphthalein excretion was 25 per cent in 15 minutes and 54 per cent in 1 hour. The urine culture and other laboratory tests were within normal limits. Diagnostic renal biopsy revealed a membranous glomerulonephritis.

The patient was placed on a 400 mg. sodium diet and allowed to equilibrate for electrolyte studies. During this equilibration period the patient lost 8 lbs. on bed rest and salt restriction alone. During a 3-day control period after equilibration the urine volume averaged 1,010 c.c. per day, sodium excretion 71 mEq. per day, potassium excretion 38 mEq. per day, and the chloride excretion 71 mEq. per day. During the subsequent 6-day treatment period on chlorothiazide the patient lost 20 lbs. of body weight and fell to a dry weight of 116 lbs. The urine volume on chlorothiazide averaged 2,650 ml. per day. The sodium excretion averaged 191 mEq. per day, the potassium 44 mEq. per day, and the chloride excretion 248 mEq. per day. The patient did not receive any steroids during this diuresis but was placed on 80 mg. of Meticorten per day as maintenance therapy after discharge from the hospital. Proteinuria was undiminished at the time of hospital discharge but has since fallen progressively to 1.5 Gm. and later to 0.8 Gm. per day on high steroid dosage. A small reaccumulation of edema has occurred on only one occasion in the 3 months subsequent to hospital discharge, and this yielded promptly to 3 tablets of chlorothiazide.

Comment. This patient offers an excellent example of a marked diuretic response to chlorothiazide in a nephrotic patient with membranous glomerulonephritis and a good filtration rate who received no steroid therapy.

**Case 3.** The patient is a 45-year-old white woman referred because of a chronic nephrotic syndrome of undetermined etiology. Albuminuria and edema had begun 2 years previously following a respiratory infection and had become exacerbated during her pregnancy. She was documented to have albuminuria, occasional hematuria, hyaline and granular casts, elevated sedimentation rate, hypoalbuminemia, total serum protein of 3.9 Gm., a nephrotic electrophoretic pattern, hypercholesterolemia of 293 mg., and total lipoids of 1,083 mg. per 100 ml. of blood. The protein excretion in the urine was in the range of 4 Gm. per day. She had had a number of admissions to other hospitals and was treated during this interval with bed rest, sodium restriction, penicillin, intermittent infusions of dextran, potassium nitrate, acetazoleamide, intermittent ammonium chloride, and infusions of 10 per cent gelatin. Although her previous best dry weight had been 140 lbs., her weight during this 2-year period fluctuated from 139 to 151 lbs. with edema always present.

Physical examination revealed atrophy of the skin and muscles, hypotension with a blood pressure of 95/55, retinal edema, pleural effusion, ascites, ballotable liver, 4 plus edema of the ankles, pretibial regions and thighs, and marked edema of the abdominal and thoracic body wall. Hyaline casts, granular casts, hyaline casts with fatty inclusions, doubly refractile fat bodies, renal tubular epithelial cells, occasional red and white cells were present in her urinary sediment. Protein excretion was 4.6 Gm. per 24 hours, and all blood chemistry examinations were compatible with a nephrotic syndrome. Phenolsulfonphthalein excretion was 21 per cent in 15 minutes. Endogenous creatinine clearance was 75 and 69 ml. per minute.

Renal biopsy was positive for amyloidosis with focal glomerular involvement. During a control period her weight ranged between 150 and 155 lbs. The urine output averaged 1,500 ml. per day, and the sodium and chloride excretion in the urine was less than 8 mEq. per day. The patient was then treated with ACTH, 60 units every 12 hours, and chlorothiazide, 375 mg. every 6 hours. There was a moderate increase in chloride excretion but no significant diuresis with it and a weight loss of only 3 lbs. in 8 days. After 14 days the ACTH was discontinued while the chlorothiazide dosage was maintained, and the serum albumin was raised by infusions from 1 to 2.2 Gm. A rapid diuresis started on the seventeenth day with a fall in weight from 144 to 117 lbs. in 5 days. The patient was discharged from the hospital on maintenance doses of steroid and antibiotics, and the intermittent use of chlorothiazide. For 9 months the tendency to recurrent edema has been controlled within a 10 lb. weight range by intermittent administration of chlorothiazide, which regularly results in a 3 to 5 lb. weight loss on the administration of 1 Gm. per day. During this interval the endogenous creatinine clearance has increased to 125 ml. per minute and the phenolsulfonphthalein excretion to 37 per cent in 15 minutes. There has been no evidence of chronic toxicity.

Comment. This patient with nephrotic syndrome due to amyloidosis failed at successful maintenance with a wide variety of diuretic regimens including the use of acidifying salts, plasma expanders, and carbonic anhydrase inhibitors. In the presence of a reduced filtration rate and a serum albumin concentration of 1 Gm.

no significant diuresis could be achieved with chlorothiazide although the chloride concentration in her urine was significantly elevated by the drug. However, with elevation of her glomerular filtration rate by adrenal steroids and expansion of her plasma volume by the injection of albumin a massive diuresis was obtained and the patient could then be maintained satisfactorily on diuretic therapy without any signs of interim toxicity.

**Case 4.** A 44-year-old man, a lawyer, had a single high blood pressure reading 20 years previously, and 5 years previous to admission developed severe mid-epigastric ache going to the left lower quadrant and through to the back. He was noted to have a blood pressure of 160/110. One year previous to admission he complained of continued severe abdominal pain, recurrent fever and puffy eyelids, and was found to have albuminuria. His mother died of uremia at the age of 62. There was no other renal disease or unexplained death in the family.

Physical examination revealed a healthy-appearing man with a blood pressure of 146/114. There was A-V constriction and arteriolar narrowing in the retina. The left kidney was palpable and large with some irregularity in the lower pole. The intravenous pyelogram showed the infundibula of the right calyces to be elongated, and some of the calyces were dilated and deformed. There were also multiple cystic deformities of the left kidney. Urinalysis and culture were normal. The blood urea nitrogen was 15 and the cholesterol 324 mg. The endogenous creatinine clearance corrected was 83 and 85 ml. per minute. Phenolsulfonphthalein excretion was normal.

The patient was followed for 6 months with no therapy and complained continuously of recurrent pain in the abdomen, sudden sharp pains in the left kidney region, severe fatigue, weak and heavy sensations, and recurrent chills. These pains were attributed to enlarging cysts. They were present without any substantial interval for 3½ years and occurred at least once a month. By April, 1957 the patient's blood pressure had risen to 170/120, and headache, chest tightness, and pain in the abdomen had become more severe. The blood urea nitrogen rose to 31 mg., and the patient was started on Apresoline, 85 mg. per day, with a slight decrease of blood pressure to the range of 150/110. There was no relief in the focal pressure syndromes. The patient was placed on 0.5 Gm. of chlorothiazide every 12 hours, 2 days a week. There was an average weight loss of 2 to 4 lbs. on the diuretic day with regain of weight in the interval. Headaches and abdominal pains disappeared promptly and completely. In July, 1957 the chlorothiazide was increased to 3 days per week. Consistent weight losses of 2 to 4 lbs. continued, the blood pressure fell to 148/100, and the patient stated that he felt the best he had in recent memory. He has been continued on this regimen until October, 1957, at the present writing. He has been completely asymptomatic since the beginning of the use of chlorothiazide and states that for the first time in 2 years he is completely free of abdominal pain, back pain, headaches, and the feeling of heaviness in the abdomen. There has been no abnormality in serum electrolytes, no change in the urinary sediment, and no detectable toxicity in the use of chlorothiazide in this 4-month period.

**Case 5.** A 41-year-old man was known to have polycystic disease for 7 years previous to admission. He had recurrent bleeding and infection and had passed renal calculi a year previous to admission. He had moderate hypertension, albuminuria, hyaline-granular casts, 10 to 20 white blood cells with clumps, a blood urea nitrogen of 34 mg., endogenous creatinine clearance of 41 ml. per minute, serum creatinine of 2.8 mg., phenolsulfonphthalein excretion of 6 per cent in 15 minutes and 25 per cent in 1 hour. He had persistent complaints of sensation of abdominal heaviness or dragging pain in the renal area and excessive fatigue. He was placed on an interrupted schedule of 1.5 Gm. of chlorothiazide per day, 2 days on and 2 days off. A weight loss of 1 to 3 lbs. with reaccumulation occurred regularly on this schedule, but the patient had complete relief of his symptoms. At the end of 1 month of maintenance therapy the drug was stopped for 10 days and the patient promptly accumulated 8 lbs. of edema and had recurrence of the previous symptoms. On reinstitution of the chlorothiazide he lost 7 lbs. in 4 days and again had complete relief from his symptoms.

Comment. This case illustrates the effective control of symptoms in a patient with proven polycystic disease by the intermittent use of chlorothiazide.

## SUMMARY

Physiologic principles for the indications and restrictions of diuretic therapy in renal disease have been reviewed.

Chlorothiazide has been found to be a potent, safe, and effective adjunct in the treatment of a wide variety of renal disorders.

Search should be continued for a more complete tubular blocking agent for patients with marked reduction in glomerular filtration rate.

(*Continued on page 670*)

# CLINICAL TRIAL OF A NEW TRANQUILIZER, PROCHLORPERAZINE

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NEW TRANQUILIZING drugs are being made available in such numbers that the general practitioner may well find choosing among them confusing. He realizes that elaborate comparative studies of these drugs are seldom feasible in general practice and he lacks the facilities and selected patient body available to the psychiatric specialist for such studies. Nevertheless, I felt that simply choosing and using a new drug did not seem adequate to meet the persistent problem of anxiety states. Accordingly, when a new drug, prochlorperazine (Compazine*) became available to me, I undertook careful evaluation of it in the actual conditions of practice—a practice typical, I suspect, of those served by today's heavily burdened generalist.

Criteria for evaluating the drug were drawn from experience with the office patient suffering anxiety. A really effective drug would keep him from generating anxiety out of proportion to his actual problems; it would not produce overtranquilization or complacency, enabling him to ignore his problems. Rather, it would enable him to consider them calmly and do his best to solve them. An effective drug would enable the patient to achieve adequacy in work, social activities, and private life. It would be safe and would have no undesirable side-effects.

Prochlorperazine is a phenothiazine compound. Animal pharmacology data[1] had shown the drug to be highly effective in blocking conditioned response, suggesting its effectiveness as a tranquilizer in humans. These data had also shown that the drug functions as an antiemetic and has a low toxicity. Preliminary clinical studies abroad seem to bear out these findings.[2]

## METHOD

One hundred patients suffering mild to moderate mental and emotional disturbances in which anxiety was prominent were chosen for study. Seventy-four of these patients were first seen during an office visit. After thorough physical examination, including laboratory tests if indicated, all patients were interviewed at length to determine diagnosis and severity of their mental and emotional disturbances. Twenty-six patients were first seen as office or hospital emergencies, but were later examined and interviewed in the same manner as the other 74 patients.

Anxiety was manifested by complaints of apprehension, tension, agitation, hysteria, headaches, irritability, insomnia, anorexia, chronic alcoholism, and depression. The depression, it should be noted, was agitated depression associated with the anxiety states. The 26 patients first seen as emergencies included 14 with severe emesis, 5 with alcohol-induced hyperactivity, and 7 with hysteria (4 with severe muscle spasm, 2 with cancerphobia, and 1 with globus hystericus). Three of the patients with emesis and 3 of the alcoholics required hospitalization for 2 to 5 days, but all were followed as office patients after discharge. Seven of the 100 patients were borderline schizophrenics, 12 (including the 5 alcohol emergencies) were chronic alcoholics, and 1 was a narcotics addict.

Somatic disorders often associated with a strong psychic component were observed in 18 patients. Physical examination revealed 8 cases of neurodermatitis, 2 of paralysis agitans, and individual cases of peptic ulcer, prostatism, pruritus vulvae, stomatitis, and polyneuritis. Hypertension associated with anxiety was observed in 3 patients. The ages of the patients ranged between 23 and 84, the average age being 45. The group included 81 women and 19 men.

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* Trade name for 2-chloro-10-[3-(1-methyl-4-piperazinyl)-propyl]-phenothiazine, a product of Smith, Kline & French Laboratories, Philadelphia, Pa.

The patients were seen at intervals of approximately 1 week for the first month and at longer intervals thereafter, depending upon their progress. The duration of therapy was between 7 and 12 months for 20 patients and between 2 and 8 weeks for most of the other 80.

Prochlorperazine was administered as 5 mg. tablets to all patients. The starting daily dose for most patients was 1 tablet 2 or 3 times daily, but in the most severe cases it was 2 tablets 3 times a day. Prochlorperazine (10 mg. in 2 c.c. ampules) was given intramuscularly to the 26 patients whose presenting symptoms constituted emergencies. These patients were later switched to oral medication. From the outset, reduction of dosage, even to use whenever necessary, was planned, after the patient's symptoms had been brought under control.

Since prochlorperazine had been shown to modify conditioned response in animals,[1] the patients were advised not to drive automobiles or perform work involving motor coördination during the first few days on medication, and then to proceed cautiously in such activity.

The patients' responses to prochlorperazine were judged according to the following criteria: excellent—full relief of mental and emotional symptoms and return to normal daily life; good—marked relief of symptoms and definite improvement in daily life; fair—moderate relief of symptoms but little improvement in daily life; poor—no change, or exacerbation of symptoms.

## Results

Results with prochlorperazine were excellent in 34 patients, good in 49, fair in 9, and poor in 8. Significant improvement in the overall mental and emotional state thus was seen in 83 per cent of the patients.

The drug was highly effective in anxiety, which had been the major symptom in all of these patients. The tranquilizing effect of prochlorperazine usually became noticeable within a day or two, and considerable improvement in emotional stability was apparent. Agitation and apprehension were promptly relieved. Nervous tension and fatigue were greatly reduced, with apparently related improvement in appetite and sleep pattern. Depression resulting from the other complaints disappeared as the symptoms cleared.

Prochlorperazine relieved these symptoms without exerting certain subjective "drug effects" frequently observed with tranquilizers. It did not seem to cause personality changes or depression and did not decrease the patients' alertness or affect their reflexes. After a few days of observation the patients were satisfied that their motor coördination was not impaired, and they resumed driving automobiles or working at precision machines.

Promenstrual tension in 1 patient and anxiety associated with menopause in 2 patients responded very well. Chronic alcoholism responded very well in all 4 mild cases treated, and in 2 of 8 severe cases. The narcotics addict did not respond.

Prochlorperazine was also effective in treating the symptoms of the 7 borderline schizophrenics. Mild delusions in 3 patients responded very well. Chronic headache in 1 patient and symptoms of paranoia in another were relieved by the drug, as was the severe senile agitation in 1 patient. Schizophrenic symptoms recurring in 2 patients who had been hospitalized with the disease in the past responded well in 1 patient but only slightly in the other.

Improvements in the somatic conditions of 12 patients were noted during the period of medication. Neurodermatitis was fully relieved in 2 patients, markedly improved in 4, and slightly improved in 2. Itching stopped or decreased within the first few days of medication, and improvement in the skin became apparent within a few weeks. In the 3 patients suffering hypertension associated with anxiety the systolic blood pressure was reduced by 30 mm. Hg. This effect was apparently therapeutic, because the drug did not produce hypotension in normotensive patients. Prochlorperazine was not used in patients suffering essential, malignant hypertension. The patient with peptic ulcer did not obtain full relief until prochlorperazine was given concomitantly with belladonna, antacids, and diet.

Side-effects of prochlorperazine were insignificant. Six patients reported drowsiness initially, but it was transient and did not disrupt therapy. One of these patients also reported vague alteration of taste sensation during the early days on medication.

The most effective daily dose of prochlorperazine for 54 patients was 15 mg. (5 mg. 3 times a day). Eight patients responded best to 10 mg. (5 mg. twice daily). The other 38 patients, including the borderline schizophrenics and most severe cases of anxiety, responded best to daily doses between 20 mg. and 30 mg. Two of these patients were given as much as 60 mg. per day for a week or two during exacerbations.

Results of parenteral administration were uniformly good. While prochlorperazine in tablet form usually acts within 90 minutes after ingestion, effects after intramuscular administration were noted within 15 to 30 minutes in all 26 patients. The 5 alcoholic emergencies, the 7 patients with hysteria, and 11 of the 14 with emesis showed complete relief after the first dose; the other 3 with emesis required a second dose 4 hours after the first.

Typical responses to the drug are illustrated in the following case histories:

**Case 1.** A 66-year-old man had become increasingly anxious over a period of 5 years and had recently had a suprapubic prostatectomy. With a much younger, though understanding, wife, he was apprehensive about his marriage. He had failed in his own business and had been obliged to take a job in which he was unhappy. On prochlorperazine, 5 mg. 3 times daily, his response was excellent. He reported significant improvement in his ability to relax; he now eats more, rests naturally, and enjoys his work. Increased capacity for work has relieved his sense of insecurity in the job. His apprehension about his marriage has been relieved, and he has actually become optimistic again. He has maintained his improvement for 5 months and now takes prochlorperazine, 5 to 15 mg. per day, as necessary.

**Case 2.** A 39-year-old woman seemed to be approaching a psychotic outbreak. With a history of pancreatitis, she had become increasingly agitated and depressed during the past year. She was unable to concentrate on her job as a commercial artist and hat designer, and she feverishly took numerous euphoriant and sedative drugs in the hope of gaining relief. She suffered extensive psychomotor agitation. On prochlorperazine, 20 mg. (5 mg. twice daily and 10 mg. at bedtime), her response was excellent. Her agitation and depression were greatly reduced by the time of her second visit, and she returned to her job with renewed confidence. She was aware of improved outlook and physical well-being and felt no further need for other drugs. After more than a year of treatment she has maintained her improvement on 5 mg. 3 times a day as necessary, and has been able to skip the medication for weeks at a time.

**Case 3.** A 43-year-old woman suffered severe obesity (height: 5 feet, 6 inches; weight: 229 pounds) and was markedly depressed over the medical and social consequences. She also suffered mild hypertension associated with anxiety (blood pressure, 180/100). Resistant to counseling, she resigned herself to despondency and mild chronic alcoholism. On prochlorperazine, 5 mg. 3 times a day, her response was good. Her outlook promptly improved, and her blood pressure dropped to 150/90. She lost 23 pounds and reduced her consumption of alcohol by $^2/_3$. She is much more amenable to counseling and shows greatly increased insight and determination in confronting her personal problems.

## COMMENT

Because prochlorperazine acts without producing significant sedation or subjective "drug effects," it is a desirable compound for use in the anxious neurotic who tends to interpret any unusual effect as a further symptom. This drug does not impede but rather promotes a prompt return to normal routine. The patients in this study were aware of their improvement, but they were not constantly aware of being under medication, an important advantage for most of them.

One striking benefit of prochlorperazine was the increase in objectivity and insight of the patients. They seemed able to escape the neurotic urgency of their problems and to evaluate them more realistically. The improved outlook of these patients enabled them to overlook or make a mature approach to personality clashes, working conditions, or marital disharmony that had previously upset them. They approached their daily routines with renewed confidence and optimism, with feelings of security and accomplishment for the first time in weeks or months. Increased efficiency and capacity for work at a job or in the home were particularly evident.

Admittedly, no drug is a panacea. However, prochlorperazine appears to provide full relief or considerable improvement in the majority of anxiety states seen in general practice, and it does so promptly and safely, as results in this study indicate. For many of these patients these improvements meant the difference between being able or unable to earn a living. For 7 patients the improvements meant that they could avoid hospitalization or extensive psychotherapy, which would very probably have been necessary otherwise.

## Summary

One hundred office patients suffering anxiety were treated with prochlorperazine for periods ranging between 2 weeks and 1 year. Of 26 patients whose presenting symptoms constituted emergencies, 10 were hospitalized for 2 to 5 days but were later treated as office patients.

Improvement was excellent or good in 83 patients. Apprehension, tension, agitation, hysteria, headache, irritability, insomnia, anorexia, and depression associated with anxiety responded very well to prochlorperazine. Premenstrual tension, chronic alcoholism, and neurodermatitis were relieved by the drug, as was hypertension associated with anxiety. The drug also was effective in treating 7 borderline schizophrenics.

Prochlorperazine relieved these symptoms without causing personality changes or depression and without decreasing alertness or affecting reflexes. It did not produce the subjective "drug effects" frequently observed with tranquilizers.

Total daily doses ranged from 15 mg. to 30 mg. Except for the borderline schizophrenics, reduction in dosage or use of prochlorperazine as necessary adequately maintained the patients after their symptoms had been brought under control. Prochlorperazine ampules, 10 mg. per 2 c.c., relieved hysteria, severe emesis, severe muscle spasm, and alcohol-induced hyperactivity within 15 to 30 minutes.

Side-effects were insignificant; they were minor and transient, and were seen in only 6 patients.

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# VIRAL HEPATITIS

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VIRAL HEPATITIS has been known since the days of early civilization, but its differentiation from other diseases causing jaundice has been indefinite. During the wars of the Middle Ages it was overshadowed only by the plague and cholera as an epidemic disease. One of the earliest comprehensive descriptions was given in the eighth century in a letter from Pope St. Zacharias to the Archbishop of Mainz.

During the Napoleonic Wars and the United States Civil War the incidence of viral hepatitis was high. During World War I armies in many parts of the world were affected by epidemics. There followed a particularly high incidence during World War II with the wide distribution of armies in various parts of the world. The Korean conflict also saw outbreaks on a milder scale. The epidemic form has been associated ordinarily with disasters and with the living of human beings in close quarters. However, sporadic cases may spring up in areas where there has been no crowding.

Homologous serum jaundice was first noted in Bremen, Germany in 1885. This followed inoculation of over a thousand workers with smallpox vaccine prepared from human lymph. Of this group 199 developed hepatitis. Another group of 500 vaccinated with a different lymph remained well. Other outbreaks following immunization against yellow fever were described in 1938. Thousands of cases of homologous serum jaundice were produced in 1942 by the administration of icterogenic yellow fever vaccine to United States Army personnel.[1]

According to figures compiled by the United States Public Health Service viral hepatitis ranked fifth among infectious communicable diseases in this country, with 32,000 reported cases in 1955. Serum hepatitis was relatively infrequent by comparison. Diseases ranking higher were measles with 555,000 reported cases, venereal disease with 367,000 cases, scarlet fever with 147,000 cases, and tuberculosis with 98,700 cases. In 1956 there was a decrease in viral hepatitis, but, although figures are not as yet complete, it still ranks fifth among infectious communicable diseases.

## ETIOLOGY

Two etiologic types of the disease are recognized: infectious hepatitis caused by virus A (IH virus) and serum hepatitis caused by virus B (SH virus). The incubation period differs markedly. Infectious hepatitis caused by virus A has an incubation period of 2 to 6 weeks, transmission occurring by ingestion of contaminated food or water or close personal contact with carriers. Infectivity tends to diminish with the subsidence of acute symptoms; however, carriers have been identified for as long as 16 months after the initial infection.

Serum hepatitis caused by virus B requires an incubation period of 1½ to 6 months. Transmission occurs by the parenteral route following transfusions or utilization of inadequately sterilized syringes. Dissemination through insect factors and sexual contamination is possible, and in this condition the carrier rate may persist indefinitely.[1, 2, 3]

## PATHOLOGIC CONSIDERATIONS

The basic lesion is damage to the individual liver cell leading to degeneration or necrosis. Histopathologic changes following represent the interaction of the infectious agent as it overcomes natural resistance and the local and general body defenses as they attempt to combat the assault.

At the same time there is removal of necrotic cells and replacement of damaged cells by regeneration.

With damage to individual cells there is a disruptive effect on the function of the organ, the results of which are expressed in liver function tests. The disruption of bile capillaries secondary to necrosis of individual liver cells which form their walls is an expression of damage to the functional units of the liver. This permits bile to enter the blood stream and is responsible for the jaundice.

The effects of hepatitis are usually proportional to the extent of damage to the parenchyma. A single mild assault with necrosis of some of the liver cells followed by undisturbed regeneration and restoration of normal architecture characterizes a transient type of hepatitis and is usually followed by complete healing and restoration of normal function. Simultaneous destruction of all or most of the units must of necessity cause death. Between these two extremes are most instances of uncomplicated infectious hepatitis.[1, 2]

Damage to the parenchymal cells gives rise to positive cephalin flocculation tests. Elevation of the serum alkaline phosphatase usually indicates a biliary obstructive factor. However, there is little correlation between the histologic lesions and the intensity of the jaundice or disturbances in the metabolic function of the liver. When the disease is confined to the portal and periportal structures (cholangiolitic hepatitis), the cephalin flocculation is often negative while the serum alkaline phosphatase is elevated, the blood cholesterol is elevated, there is itching of the skin, and an enlarged, firm liver simulates the picture of extrahepatic obstructive jaundice. The larger bile ducts are usually not involved in infectious hepatitis; however, there is evidence of gastritis and duodenitis as proven by roentgenologic and gastroscopic examinations in certain cases.[1]

## Clinical Aspects

There is usually a preicteric stage ranging from 20 to 120 days according to the type of infection. Increased fatigability, irritability, mild mental depression, and loss of appetite may be noticed. Headache, chilly sensations, nausea, vomiting, upper abdominal distress, epistaxis, and passage of dark-colored urine appear in due time. There may be marked tenderness over the region of the liver, which may be variably enlarged and tender. The spleen is enlarged in about a fifth of the cases. The temperature is variable, ranging between 99° and 103° F. Passage of dark-colored urine with bilirubinuria especially in the morning specimens may appear several days before the onset of jaundice.

With the onset of jaundice symptoms of the disease may abate. Jaundice with severe itching of the skin may last from 1 to 6 weeks or longer in patients with severe liver damage. In certain cases edema with or without ascites may be encountered. Mild to marked mental depression which persists after the initial infection has subsided is the rule. Many irregular and neurotic complaints with extreme hyperirritability are notable in many cases. As the jaundice fades the appetite usually reappears, and this signifies the recovery period.[2]

## Differential Diagnosis

It must be determined whether the jaundice is intrahepatic, extrahepatic or hemolytic in origin. The acute surgical abdomen of gallbladder disease or acute appendicitis must be excluded in many early cases. Viral hepatitis must also be differentiated from a variety of infectious diseases including the hepatitis of secondary syphilis, the hepatitis of Weil's disease, and hepatitis of toxic causes such as exposure to phosphorus, arsenic, benzol and other organic compounds. Infectious mononucleosis may simulate viral hepatitis in onset, history and laboratory findings. Cases have been noted that progress from one disease to the other or give the appearance of one complicating the other at the same time.[4, 5]

## LABORATORY TESTS

In the preicteric stage the passage of dark urine with elevated urobilinogen may be the first sign of viral hepatitis. There may also be elevation of the serum alkaline phosphatase, bromsulphalein retention, a positive cephalin flocculation test, leukopenia or leukocytosis with occasional large, immature mononuclear cells. During the icteric stage the cephalin flocculation test and thymol turbidity test are usually positive. There is a rise in the serum alkaline phosphatase. The serum bilirubin is elevated with both direct and indirect Van den Bergh tests being positive. The icterus index may be elevated to from 15 to 50 or higher. There is a decrease in the cholesterol esters and a marked increase in total cholesterol. The blood prothrombin time is usually decreased, while there may be marked to mild bromsulphalein retention. In severe cases there may be depletion of the total proteins with alteration of the albumin-globulin ratio. There is a marked increase in both the urinary and fecal urobilinogen. The sedimentation rate is usually increased and is a guide both to the severity of the disease and later to the improvement of the patient. There may be an accompanying hypochromic anemia.[1-4]

Serum transaminase provides a rough index of both heart muscle and liver cell injury. It has been observed that the serum glutamic pyruvic transaminase (SGP-T) might be more specific for liver cell damage than serum glutamic oxaloacetic transaminase (SGO-T) because of the more selective concentration of GP-T in liver tissue.[6, 7] C-reactive protein may also be used as an index of severity and response to treatment. All the foregoing tests show a gradual return to normal as the patient improves.

## TREATMENT

The basic treatment for this condition is rest. The weeks of convalescence are characterized by a gradual return of strength, appetite and a sense of well-being. Many patients complain of marked mental dullness. This is apparently a result of the elevated serum bilirubin, which has some effect upon the nervous system. In severe cases the convalescence is long and tedious with a low tolerance to exercise and occasional exacerbation of symptoms under mental or physical stress. Premature return to work or overzealous activity may result in recurrent headache, malaise and arthralgia with a recurrence of distaste for food. Occasionally jaundice may return and necessitate further rest.

The value of diet in the treatment of hepatitis has been discussed pro and con. However, it is generally recommended that a bland diet with high-protein, high-carbohydrate and low-fat should be encouraged. Large quantities of glucose and hard candies should be given together with the intravenous administration of 10 per cent glucose and water. For the patient who is acutely ill daily infusions of 10 per cent glucose, 2,000 to 4,000 c.c., should be given. When the prothrombin time is markedly depleted, vitamin K may be utilized. Sometimes human plasma and whole blood are of value. Human albumin may be used for imbalance of plasma proteins.

Cortisone, ACTH and prednisolone have been recommended to reduce the acute inflammatory reaction and lower the serum bilirubin in the severe icteric stage. Particularly in the complicated cases are the latter recommended.[8] Antibiotics in the form of the tetracyclines seem to have some beneficial effect and possibly prevent the occurrence of secondary infections. Pyribenzamine (tripelennamine HCl), Benadryl (diphenhydramine HCl) and Dramamine (dimenhydrinate) are helpful for nausea, sedation and itching of the skin. Vitamin $B_{12}$ and lipotropins may be of value if nutrition of the patient has been particularly poor prior to the onset of his illness. Alcohol should be completely prohibited and allowed only in limited quantities after the return to normal.[1]

The patient should avoid undue stress and fatigue for a period of 6 months. Gradual activity may be allowed after the liver is practically down to normal size and the cephalin flocculation and thymol turbidity tests are not more than weakly positive. The bromsulfalein test should show no more than 8 per cent retention in 45 minutes. Gradually activity may then be allowed and routine laboratory checks should be done at 3- to 6-month intervals after return to work.[1]

One attack of viral hepatitis confers immunity to the homologous virus. Prophylactically gamma globulin has been shown to be effective in those who have been exposed to infectious hepatitis (IH virus). It is reportedly of no value in the prophylaxis of serum hepatitis (SH virus).[1, 2]

## Prognosis

Viral hepatitis is a disease of long duration and high morbidity but low mortality. The average morbidity is about 4 months. The fatality rate is less than 0.5 per cent; however, small localized outbreaks have shown mortalities as high as 20 per cent. Variations in the mortality rate may be influenced by the particular strain of the virus, the size of the infecting dose, the age, general health and immunologic state of the patient, preëxisting liver disease, and management of the patient during the acute stage of the disease. Persons up to 30 years of age are the most susceptible. The disease may result in relapsing or recurrent viral hepatitis, prolonged hepatitis, chronic hepatitis, the carrier state and posthepatic states, including the posthepatic syndrome and hyperbilirubinemia.[1] Some acute cases have become chronic and gone to coarse nodular cirrhosis.[2]

## Discussion

As mentioned previously, the disease may range from mild liver damage to marked cellular necrosis. From clinical experience it is known that the symptoms vary with the degree of liver involvement. Many mild cases of what might be termed subclinical hepatitis present a history of lassitude, anorexia, malaise, arthralgia, and mild mental depression. These may show no abdominal signs such as tenderness in the liver region or splenic enlargement, but may exhibit a positive cephalin flocculation test and thymol turbidity with elevation of the blood cholesterol and increased sedimentation rate. Unless these studies are performed, the diagnosis may be completely missed. These findings, of course, are all variables.

At the other extreme is the acutely ill patient with marked jaundice, enlarged and tender liver, palpable spleen, edema and ascites with markedly positive laboratory findings. The hepatogram may show marked elevations of the alkaline phosphatase and total cholesterol, a decreased cholesterol-ester ratio, changes in the serum protein and albumin-globulin ratio, and marked elevation of the serum bilirubin. There may be a strongly positive cephalin flocculation test, increased thymol turbidity, decreased prothrombin time and marked bromsulphalein retention. The urine and feces will usually show increases in the urobilinogen content.

## Illustrative Cases

The following cases are presented to show the extremes of viral hepatitis. The first case is an apparently mild one with certain findings suggestive of mononucleosis. The second case is one of marked viral hepatitis with practically all the findings listed in the foregoing discussion.

**Case 1.** The patient was a white male, aged 13 years. He stated that about 2 months prior to admission he had begun to notice tiredness and weakness. Any undue effort caused fatigue and dizziness and a feeling of aching all over. Shortly after starting school in September he developed an infection in his right ear, which was followed by swelling of the left side of the jaw and a sore throat. His appetite became increasingly poor. Nausea developed, and the dizziness and weakness became markedly accentuated.

A blood study done prior to admission revealed the possibility of an infectious mononucleosis. The heterophil antibody test had been positive in a titer of 1:56. The white blood cell count had revealed a leukopenia of 3,500 with 24 per cent granulocytes, 74 per cent lymphocytes, and 2 per cent monocytes. Past medical and family history were noncontributory.

Physical examination revealed an alert boy, well developed, well nourished, coöperative and intelligent. The skin showed no evidence of jaundice. The head, neck and chest were within normal limits. Examination of the abdomen revealed hepatomegaly with some tenderness, the liver being palpable about 1 fingerbreadth below the costal margin. The spleen was also palpable and somewhat tender. Examination of the local lymph glands revealed adenopathy involving the cervical, axillary, inguinal and epitrochlear glands. The temperature was slightly elevated throughout the patient's hospitalization, but never any higher than 99.8°F.

The blood count done on admission revealed a hematocrit of 39 per cent and a hemoglobin of 12.7 Gm., or 78 per cent. There was a leukopenia of 4,100 with 31 per cent neutrophils, 64 per cent lymphocytes, and 4 per cent eosinophils, with 1 band form and 30 per cent segmented forms. Urinalysis was essentially negative. An hepatogram was performed which revealed the following: alkaline phosphatase, 4.4 units; total cholesterol, 244 per cent; cholesterol-ester ratio, 74 per cent; total proteins, 7.9 Gm.; cephalin flocculation test, 4 plus; thymol turbidity test, 5 Maclagan units; prothrombin time, 90 per cent; urine urobilinogen, 2 mg.; feces urobilinogen, 300 mg.; serum bilirubin, 1.1 mg. The icterus index was 9 units, the direct Van den Bergh was negative, and the indirect Van den Bergh was 1.1 mg. per 100 c.c. of blood. The bromsulphalein test revealed no retention in 45 minutes. Serum amylase was 85 mg. per cent by the Somogyi method. The heterophil antibody reaction was positive in a dilution of 1:8. The sedimentation rate showed a fall of 5 mm. per hour by the Wintrobe method.

Treatment consisted primarily of bed rest and a low-fat, high-carbohydrate and high-protein diet. Tetracycline hydrochloride was given daily, 500 mg. in 1,000 c.c. of 10 per cent glucose. Parenteral B complex, vitamin C, vitamin $B_{12}$ and Vi-Syneral (multivitamins) were given 3 times weekly. Vitamin K was given orally in dosage of 5 mg. 3 times daily. Dexamyl (dextro-amphetamine sulfate with ambobarbital) was given twice daily for mental depression. Bonadoxin (meclizino dihydrochloride with pyridoxine HCl) proved useful for nausea.

After a period of 6 weeks in the hospital and a 4-month convalescence, this patient finally showed a return to normal. This apparently mild case required almost 6 months for total convalescence, during which the patient went through a period of severe apathy, depression and marked physical weakness. After 6 months his hepatogram showed a full return to normal.

**Case 2.** This patient was a white woman, aged 45, with a chief complaint of jaundice, weakness, nausea, vomiting and abdominal discomfort of about 1 month's duration. She had been abroad during the fall months and had first noticed jaundice while in Spain. She returned to this country and presented herself for hospitalization. On admission physical examination revealed a tall, slender, markedly jaundiced woman lying comfortably in bed. The head, neck, chest, heart and lungs were negative. The skin and sclerae showed deep icterus. The liver was tender and palpable approximately 2 fingerbreadths below the costal margin. The spleen was also palpably enlarged. There was no adenopathy of the regional lymph nodes.

Blood count on admission revealed a hemoglobin of 79 per cent with a red blood cell count of 3,900,000. There were 9,900 white blood cells, with 66 per cent polymorphonuclears, 33 per cent lymphocytes, and 1 per cent eosinophils. A hepatogram performed shortly after admission revealed the following: alkaline phosphatase, 11.5 units; total cholesterol, 239 mg. per cent; cholesterol esters, 51 per cent; total proteins, 7.5 Gm. There was a 4 plus cephalin flocculation test, and the thymol turbidity test revealed 19 Maclagan units. The prothrombin time was 100 per cent, the urine urobilinogen 0.9 mg., the feces urobilinogen 105 mg., and the serum bilirubin 10.1 mg. per cent with an immediate positive direct Van den Bergh. The icterus index was 60 units. A total serum protein done 4 days later was 7.1 Gm. The albumin was 3.9 Gm. and the globulin 3.2 Gm. with an albumin-globulin ratio of 1.2:1. She developed a marked pitting edema of both legs.

Treatment in this case was basically the same as in the foregoing case, i.e., bed rest, low-fat, high-carbohydrate and high-protein diet and vitamin supplements parenterally. Tetracycline hydrochloride was also given, 500 mg. daily in 1,000 c.c. of 10 per cent dextrose. Human albumin, 100 c.c., was given intravenously to correct the serum protein imbalance and changed albumin-globulin ratio.

This patient followed an uneventful clinical course. The edema vanished, the jaundice cleared, her appetite returned and she was dismissed from the hospital after approximately 4 weeks. Regular rechecks of her hepatogram revealed positive liver function tests for a long period of time. Five months after her hospitalization the cephalin flocculation test was still 4 plus and the thymol turbidity test showed 9.5 Maclagan units. The bromsulphalein test still showed 17.3 retention after 45 minutes. Eighteen months later after serial blood studies the tests finally showed full return to normal.

## SUMMARY

Viral hepatitis has been recognized as a specific disease entity since the eighth century. However, it still presents a problem to the modern practitioner because of its high rank among communicable diseases. It is at times difficult to differentiate from other diseases such as infectious mononucleosis and acute abdominal disorders. Because of its long morbidity, it takes not only a physical but a mental toll on the patient.

A comprehensive survey of viral hepatitis has been presented in terms of historical background, etiology, pathology, clinical aspects, differential diagnosis and treatment. Two exemplary cases emphasize the importance of early recognition of both acute and subclinical cases by utilization of proper diagnostic laboratory tests and early institution of proper treatment. In addition to the usual liver function tests, serum transaminase has been shown to provide a rough index of liver cell injury.

Current methods of treatment have been reviewed with particular emphasis placed upon bed rest and the utilization of the corticosteroids and ACTH in acute and recurrent cases. The importance of clinical testing during convalescence has been stressed.

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# INNOCENT (FUNCTIONAL) MURMURS IN CHILDHOOD

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AN INNOCENT (functional) murmer may be defined as one which occurs in the absence of any disease or important abnormality, and which therefore has in itself no clinical significance, either at the present time or in the future.[1] To avoid confusion, it is preferable to apply the terms "innocent" or "functional murmer" only to individuals in whom structural valvular changes can be reasonably excluded, and who are free of any disease, general or cardiac, that is known to cause a murmur.[2]

The differentiation between organic and innocent murmurs can tax the diagnostic ingenuity of the most skilled physician, for it is generally conceded that the innocent murmur does not possess a pathognomonic feature that can distinguish it absolutely from an organic murmur. There is no single criterion or combination of criteria or measurements employed in the physical examination which alone can serve to differentiate all of the innocent murmurs from the organic ones.[3] However, the etiology of a murmur must be firmly established in order that remedial or palliative treatment may be employed if heart disease is present, or that the patient and his family may be reassured, if the heart is normal.

The great majority of innocent murmurs are systolic in time, with the exception of the venous hum at the base of the heart, which is a continuous murmur with diastolic accentuation.[4] Its disappearance on compression of the ipsilateral jugular vein, its accentuation if the neck is extended when the patient sits up, and its virtual disappearance when he lies down usually allow an easy differential diagnosis.[5]

Since the most common murmur in childhood is the innocent systolic murmur, [6] it is well to analyze the usual characteristics in detail, including duration and time in the cardiac cycle, intensity and site of maximum intensity, transmission, and effect of change in position and exercise.

These murmurs are heard at various sites along the left sternal border, and occasionally at the aortic area and apical region; therefore, the site of maximum intensity cannot be used as an absolute criterion to distinguish between an organic and an innocent murmur.[2]

The quality of murmurs varies considerably, and the ability of the individual to classify auditory impressions is equally varied. The majority of these murmurs have a musical quality, but some may be characterized as rough or blowing or a combination of both.[2]

Most innocent murmurs are short and probably never fill all of systole. The majority are faint to moderate in intensity, usually corresponding to grades I to III, based on Levine's classification ranging from grade I through grade VI.

As a rule, innocent murmurs are not widely transmitted, although some degree of transmission is present in most of them. This may be because the murmurs are not loud and the extent of transmission of the murmur is mainly dependent on the intensity. The fact that some faint murmurs are transmitted suggests that there may be other factors than intensity involved. The important point is that the presence of transmission of a murmur is not necessarily proof of its organic etiology.[2]

Both the intensity and the audibility of innocent murmurs are influenced by the position of the subject. Most are loudest when the patient is recumbent, although a small percentage are better heard when the subject is erect, or there is no change in intensity with change in position.

Innocent murmurs do not respond in a uniform manner to exercise. Most become louder after effort, a few become fainter or show no change, and a few disappear. In a few children the murmur will only appear after exercise.[2]

It is obvious that a fairly complete cardiovascular study is necessary to properly evaluate a heart murmur in a child. One cannot rely on the stethoscope alone, but must examine the whole child carefully with the usual technical aids to elicit the evidence for and against cardiac disease. The collective data thus obtained, rather than any one characteristic or finding, must be used to decide the nature of the murmur.

The physician's responsibility does not end when he has established the innocent character of the murmur. These children have normal cardiovascular systems, both anatomically and physiologically, and it is clearly not necessary to limit their exertion because of the murmur alone. Any attempt or suggestion to do so only leads to a suspicion on the part of the child and the parent that the physician is withholding information from them. The harm that is done to the child's development, the unnecessary mental disturbance to the parents, and the danger of initiating or perpetuating a cardiac neurosis are the real dangers of such excessive protection on the part of the physician.[2] Furthermore, once the innocent nature of the murmur has been established with reasonable certainty, there is no need for frequent repeated cardiac evaluations, as these only serve to cause doubt in the minds of the patient and the other members of the family.

## Summary

An innocent (functional) murmur is one which occurs in the absence of any disease or important abnormality. The differentiation between organic and innocent murmurs may be difficult or impossible on the basis of physical examination alone as the innocent murmur does not possess a pathognomonic feature that can distinguish it absolutely from an organic murmur. One cannot rely on the stethoscope alone but must examine the whole child carefully with the usual technical aids. The physician's responsibility does not end once the innocent nature of the murmur has been established. He must insist that the child be permitted to lead a normal active life, and he must guard against undue emphasis on the presence of the murmur.

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# President's Page

## MEDICAL COUNCIL OF THE WASHINGTON METROPOLITAN AREA

Population forecasts for the coming decade indicate that Metropolitan Washington is due for still more tremendous growth. Unprecedented growth in population has taken place since 1940 and there has been a corresponding increase in the number of physicians in private practice. In an effort to obtain good liaison between the District Medical Society and County Medical Societies situated within the Washington Metropolitan Area, a Medical Council, consisting of representatives from the bordering medical societies in Maryland and Virginia and the District of Columbia, was established in January of this year. Dr. Ralph M. Caulk became its first president.

Medical economics gave birth to the idea. The establishment of Medical Service, the Society's prepayment plan, had an impact on the practice of medicine in the surrounding counties which had not been anticipated nor even thought of. We were concerned and preoccupied with establishing a prepayment plan in our own geographic and political boundaries. About this time, the Executive Director of our medical society recognized the need for such a council when he wrote in the January 1951 issue of the MEDICAL ANNALS: "In the light of these developments [growth in population] it is not surprising that misunderstandings have occurred between the above medical groups which might have been avoided if there had been a closer association." The proposed Council was approved by the Executive Board, which was convinced that it would be advantageous to everyone concerned, but one of the county medical societies was reluctant to join.

No further steps were taken for the next 6 years, when other developments in medical economics again served as a stimulus. This time the Medicare program led to a revival of the idea. The County Medical Societies within the Metropolitan Area made a request to become co-signers with the Society in its agreement with the Department of Defense in the Medicare program.

These developments made us realize the need of an organization where problems of mutual interest could be discussed. The action of each individual society was having an impact on all the others. Many of the physicians were practicing within several geographical and political areas and the doctors in nearby Maryland and Virginia frequently found their interests more closely allied with those of the District than with their own state. Often, state and county organizations did not represent their real interests. The establishment of a coöperative group was a means by which we could play a more informed role in the planning and execution of medical plans in the present and future expansion of population in the Washington Metropolitan Area.

Membership in the Medical Council of the Metropolitan Area consists of the President, the Past President and the President-elect from each participating medical society. Also invited to the tri-yearly meetings are the executive secretaries of each organization, whose experience gives them a knowledge of possible pitfalls in any overall program. When important problems concerning public health are scheduled for discussion, health officers will be invited to sit in with the Council.

The Council serves as a market place for the exchange of ideas. It may be compared with the United Nations, whose main function is to serve as a forum to influence public opinion. It has no power, because the medical societies are not governed by its actions. It makes recommendations and, if authorized, undertakes area-wide programs. Since the Council membership consists of county representatives from 3 large states it is in a position to exercise local and national influence.

To be effective, a structure must be functional. If the Medical Council of the Washington Metropolitan Area continues to function wisely for the benefit of all concerned, it will be of real service to the community.

James W. Watts

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# Editorials

## MERRY CHRISTMAS!

> "In a world that seems not only to be changing, but even to be dissolving, there are some tens of millions of us who want Christmas to be the same . . .
>
> "With the same old greeting 'Merry Christmas' and no other."
>
> From the book, *Let's Keep Christmas*—by Peter Marshall

## IMMUNIZATION AGAINST ASIAN INFLUENZA URGED

Judging by reports available to the District's Asian Influenza Advisory Committee, the incidence and prevalence of Asian Influenza have not as yet reached the expected proportions in the District of Columbia. However, reports continue to come in indicating that influenza of all types is continuing to attack individuals. Some of these reported cases are undoubtedly Asian Influenza; on the other hand, all individuals who have recently suffered from flu-like illnesses have

*Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia.*

not necessarily had Asian Influenza. We cannot be certain the disease may not flare up. In addition, we cannot be certain that a second, more severe wave will not occur with the onset of the colder weather still ahead.

There has been a significant increase in the supply of vaccine coming into the District and physicians are able to procure an ample supply to give to all their patients who want it. The Committee strongly recommends that all persons who have not yet been vaccinated should be inoculated at the earliest possible time.

The safety of the vaccine has been satisfactorily demonstrated and no evidence has been forthcoming to change our original appraisal as to the safety factor.

In families where flu-like illnesses have occurred or in which Asian Influenza was suspected, the family physician should determine the advisability of immunization.

Now that there is an adequate supply of vaccine, the Asian Influenza Advisory Committee has resolved to lift priorities and allocations. We do want to thank the physicians, the pharmacists, and all the people of this community for their fine coöperation during the past 2 months when the vaccine was in short supply.

We hope now that the vaccine is available we will not have to continue to urge the people of the community to take advantage of the protection offered by the vaccine. The physician should encourage every patient to get his or her "shot" as soon as possible. Only in this way can we be sure that, if a second wave of a more virulent infection of Asian Influenza strikes, a high proportion of the residents of Washington will be protected.

Daniel Leo Finucane, M.D., *Chairman*
Clifton R. Gruver, M.D., *Co-chairman*
*Asian Influenza Advisory Committee*

## POLIOMYELITIS—VICTIM OR VICTOR?

The Honorable Marion B. Folsom, Secretary of Health, Education, and Welfare, has reported a dramatic 80 per cent reduction in paralytic poliomyelitis in this country over the past 2 years. He warned, however, that millions of Americans under 40 still have not received full vaccine protection and thus "are needlessly risking disability or even death."

Mr. Folsom, summarizing the polio season now coming to an end, reported 1,576 paralytic cases so far this year, compared with 7,886 cases 2 years ago, before widespread use of the Salk vaccine, and 5,241 cases last year.

"For many years," Mr. Folsom said, "this country anxiously sought the means to avert the suffering and anguish caused by polio. Today, with steadily increasing supplies of Salk vaccine, the means are at hand. If people will use the vaccine available, it is possible to give paralytic polio a knockout blow within the next year. Still, more than 37,000,000 Americans under 40 have received no vaccine, and 44,000,000 have taken only 1 or 2 doses and have yet to complete the full schedule of 3 doses. It will be a tragedy if, simply because of public apathy, vaccine which might prevent paralysis or even death lies on the shelf unused."

Mr. Folsom said the Public Health Service, the National Foundation for Infantile Paralysis, the American Medical Association, State and Territorial Health Officers, and the Advertising Council are united in a campaign to urge vaccination of as many persons as possible with the full recommended schedule of 3 doses.

It is estimated that more than 72,000,000 Americans already have received 1 or more doses, out of a total population of 109,000,000 persons under 40. Estimates indicate:

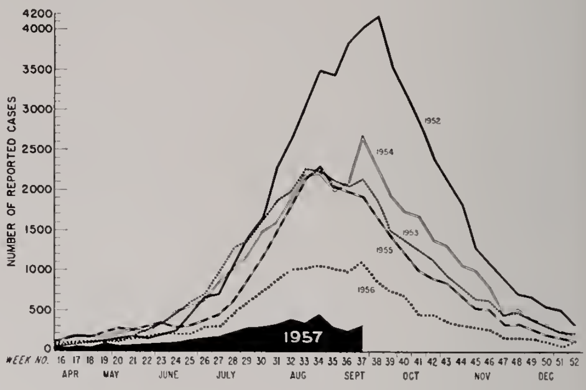
Of the 67,000,000 persons in the priority group, under 20 years of age and expectant mothers, 25,000,000 have received all 3 injections; 22,000,000 have received 2 injections;

11,000,000 have received 1 injection; and 9,000,000 have received no vaccine. Attention should be given particularly to vaccinating teen-agers.

Polio can and does strike severely at adults, however. Of the 42,000,000 persons 20 through 39 years old, 14,000,000 have been vaccinated —3,000,000 with 3 doses, 5,000,000 with 2 doses, and 6,000,000 with 1 dose. But 28,000,000 adults have had no vaccine

In a graph reproduced herewith the incidence of poliomyelitis for the months of April–September 1957 is compared with the incidence for the years 1952–1956. It tells its own story.

*Current U. S. Polio Incidence Compared with Years 1952–1956*



## LO! THE POOR POSTMAN!

> *"Neither snow, nor rain, nor heat, nor gloom of night stays these couriers from the swift completion of their appointed rounds."*—Herodotus. Hist. Book VIII, Sect. 98.

This well-known quotation bobs up when our Postmaster General appeals to Congress, without much success, for an appropriation to eliminate the deficit in his Department and for an increase in remuneration for our faithful postal employees.

We cannot recall, offhand, a single public servant who receives less commendation or reward for work well done than the postman, alias the letter carrier. He rarely appears on the front pages of the daily paper, but a heroic rescue by a fireman or the shooting of a desperate criminal in a duel with a policeman is headline material.

There did appear in the news columns some months ago, apropos of our humble carriers, a whimsical reference to the frequency with which the postmen are attacked and bitten by Chihuahuas and Great Danes protecting our homes. When the tables are turned, we may expect the postman to get his spot in the news.

The load of mail which is brought to the physicians' offices staggers the imagination and the carrier. It is impossible to enumerate all the items of which it consists, but a few stand out. Just after the first of the month bills, old and new, head the list, closely followed by envelopes of our own stamped "no such address," "not at," or "insufficient postage." Down at the end of the first-class mail are checks and money orders of varying amounts, and letters implying overcharges or of apology for inability to settle an account, or requests for a discount. Between these two groups there is a conglomeration of mail which defies complete description. "Wish you were here" postal cards, and cards which bear printed matter in no way related to the medical profession, infiltrate the mass. The open-end envelopes nominate themselves for immediate discard. The doctors have not lived down their reputation for being easy victims for get-rich-quick schemes, and, as may be expected, they are showered with circulars and prospectuses. Brokers, realtors, insurance agents, clothiers, sporting good houses, and publishers contribute their share. Solicitations for donations to support organizations which somehow were not included in the United Givers Fund list do not overlook the doctor. Tickets for benefits (for whom?) at a fixed price are not rare. The pharmaceutical houses load the postman with samples of drugs in light and heavy packages as well as with voluminous literature on medicinals of strange names that are soon forgotten. To the credit of the drug houses, it should be stated that much of their printed matter is informative, well presented, and superbly illustrated.

This heterogeneous raft of mail is lugged to our offices daily by the uncomplaining and often unseen postman. Does he realize about 75 per cent of it is consigned to the waste basket? No doubt he suspects as much, but without a word of comment he stuffs all he can through the narrow slot in the door and deposits the bulk of it on the sill. We wonder if he is ever tempted to chuck the whole lot into the sewer at the corner and call it a day. It has been done.

C. S. W.

# In and Out of Focus

BY THE OBSERVER

### *Assembly Highlights*

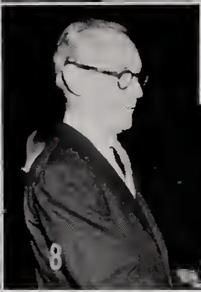
Although attendance was not as high as at some meetings in the past, nevertheless the 26th Annual Scientific Assembly was one of the most successful. Each Assembly has its distinct characteristics and the recent one was no exception. There was, obviously, a greater interest this time in the scientific program, for the meeting halls were consistently filled. On occasion, in previous years, when the registration reached its maximum, this was not true. Audiences were sometimes embarrassingly small, especially at early morning sessions. So, from this standpoint, the meeting was all that might have been wished for.

A breakdown of the registration follows:

| | |
|---|---|
| Members | 885 |
| Guest Physicians | 496 |
| Interns | 59 |
| Medical Students | 289 |
| Nurses | 227 |
| Laboratory and X-ray Technicians | 55 |
| Technical Exhibitors | 315 |
| Miscellaneous | 225 |
| | 2,551 |

Returning to the scientific program, the unique feature of this year's Assembly was, of course, the color television programs which were projected on a large screen. There were some misgivings that the image would not be sufficiently clear. For the most part, this was not the case, and the excellent presentations, under the direction of Dr. Paul W. Shafer, Director of the Television Division of Walter Reed Army Medical Center, were enthusiastically received. The programs, which were telecast from the Center, were made possible through the generous coöperation of the Surgeon General of the Army, Major General Silas B. Hayes, M.C., and the Commanding General of the Walter Reed Army Medical Center, Major General Leonard G. Heaton, M.C. The receiving equipment and the technical personnel at the Hotel Statler were furnished by the Upjohn Company, to whom the Society is already deeply indebted for the excellent closed-circuit television programs—Grand Rounds, several of which have been presented in its auditorium.

Equally popular were the panel discussions which made up the balance of the program. Seldom have those connected with the Assembly witnessed more rapt attention by such large audiences. Even the commercial exhibitors took note of this when it was reported that some of



PHOTOGRAPHIC RECORD OF MEDICAL SOCIETY'S ANNUAL SCIENTIFIC ASSEMBLY

Shown on this page are some of the speakers, exhibits, committee chairmen and others who assisted in making the 26th Annual Scientific Assembly of the District Medical Society, which was held at the Hotel Statler, October 14, 15 and 16, the successful event it proved to be.

(1) Scientific exhibit: "Behavioral Effects of Meprobamate on Normal Subjects," presented by Dr. James G. Miller of the University of Michigan.

(2) Dr. T. Clarence Routley, Consultant General to the World Medical Association, addressing the guests at the Annual Dinner, October 16, which honored the World Medical Association.

(3) Dr. Louis H. Bauer, Secretary General of the World Medical Association, who gave a brief address at the Annual Dinner.

(4) Dr. John L. Parks, Dean of George Washington University School of Medicine, speaker at the George Washington University Medical Society Luncheon.

(5) Left to right: Dr. James W. Watts, President of the Medical Society; Dr. Paul D. White, Emeritus Professor of Medicine, Harvard Medical School, who delivered the keynote address at the opening session, October 14; and Dr. Herbert P. Ramsey, Chairman of the Society's Executive Board.

(*Continued on page 651*)

them felt neglected because of the unusual interest in the scientific sessions.

The Scientific Exhibit attracted unusual attention, an indication of its superior quality. The judges selected the following exhibits for awards:

FIRST: "The Hands in Arthritis and Related Rheumatic Conditions," Drs. Darrell C. Crain and James A. Kehoe.

SECOND: "Brucellosis and the Heart," Drs. Thomas M. Peery and Roger H. Shannon, George Washington University School of Medicine.

THIRD: "Pediatric Diagnostic Clinic," Captain Thomas E. Cone, Jr., MC, USN; Comdr. Charles L. Waite, MC, USN; and Lt. George J. A. Magnant, MC, USN, United States Naval Hospital, Bethesda, Maryland.

Three exhibits were selected for honorable mention and will receive certificates of merit:

"Permanent Aortic Intubation in Rats—Scientific Uses," Dr. Joseph W. Still.

"Blood Volume Determinations," Drs. Salomon N. Albert, William A. Spencer, and Chalom A. Albert, Department of Anesthesiology and Surgery, District of Columbia General Hospital.

"Sickle Cell Anemia in Children—X-ray Findings," Drs. Roland B. Scott T. Wilkins Davis, Angella D. Ferguson, and Henry T. Carrington.

Considering that, part of the time, excellent scientific programs were presented simultaneously, and, when this was not the case, top attractions were scheduled in the Presidential Ballroom, the attendance at motion picture showings was surprising. However, this has always been one of the popular features of the ASSEMBLY.

Without exception the speakers at the luncheons this year made a fine impression. Dr. Elmer Hess, Chairman of President Eisenhower's Health Resources Advisory Committee, Office of Defense Mobilization, and Past President of the American Medical Association, well known to Washington physicians for his forthrightness, was the opening-day speaker. His message was brief but eloquent and timely. The Honorable Eugene J. Keogh, Member of Congress from New York, is one of the most articulate statesmen who has appeared before the Georgetown University Medical Alumni during an ASSEMBLY. His subject, "Retirement Plan for the Self Employed," was of personal interest to every physician present. Dr. John L. Parks, new Dean of George Washington University School of Medicine, made his initial appearance at the School's Medical Society luncheon. Dr. Parks was his genial and modest self in presenting his views on the future of medical education.

Of all the social events during the ASSEMBLY, the best attended was the annual dinner for the doctors' offices staffs. The Presidential Ballroom was filled to capacity and, from all appearances, everyone had a wonderful time. A panel-type program, "Quiz the Experts on the Doctor's Office," moderated by Dr. George Maksim, Chairman of the Society's Committee on Public Information, with Dr. Darrell C. Crain, Dr.

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(*Continued from page 650*)

(6) Doctors studying some of the scientific exhibits. At the right can be seen the exhibit on "The Hands in Arthritis and Related Rheumatic Conditions," by Drs. Darrell C. Crain and James A. Kehoe, which received the First Award.

(7) Registration Section, which was kept busy recording the names of physicians and their guests during the entire three days.

(8) THE HONORABLE EUGENE J. KEOGH, member of Congress from New York, who addressed the Georgetown University Medical Alumni Luncheon.

(9) DR. ALFRED E. BRIGULIO (inset), General Chairman, Committee on Arrangements, who was M.C. for the entire ASSEMBLY.

(10) THEODORE WIPRUD (left), Secretary of the Society, and GEORGE B. MCGOVERN, Manager of Medical Service, are taking time out for a good laugh.

(11) DR. ELMER HESS, Chairman, Health Resources Advisory Committee, Office of Defense Mobilization, in a characteristic pose as he addresses the Society's Opening Luncheon, October 14.

(12) The Presidential Ballroom, filled to capacity, during a large-screen color TV program, a feature of this year's ASSEMBLY.

(13) Typical of the interest shown in the Technical Exhibit is this small portion of it.

"EXPERTS" AT DOCTORS' OFFICE STAFF DINNER

Dr. George Maksim (left), Chairman of the Medical Society's Committee on Public Information, moderates a panel on "Quiz the Experts on the Doctor's Office" at the continuing popular Doctors' Office Staff Dinner, October 15. Replying deftly to questions from the audience were (left to right): Dr. Hugh H. Hussey, Professor of Medicine, Georgetown University School of Medicine; Mrs. Christine Lattin, representing the Doctors' Office Assistants; and Dr. Darrell C. Crain, Assistant Clinical Professor of Medicine, Georgetown University.

Hugh H. Hussey, and Mrs. Christine Lattin as panel members, was not only informative but entertaining. The Doctors' Dixieland Band led by Dr. George J. Cardany was enthusiastically applauded.

The Annual Dinner, in honor of the World Medical Association, suffered in attendance because a number of Washington physicians who would ordinarily have been present were attending medical meetings in New York, Chicago and Atlantic City. However, it was an enjoyable and significant occasion. Dr. Louis H. Bauer, Secretary-general of WMA, spoke briefly and was followed by Dr. T. Clarence Routley, Consulting-general to WMA, who addressed the dinner guests on the subject, "One World in Medicine." Dr. Routley, one of the most distinguished physicians of our time, gave a thoughtful and inspiring address. The Doctors Symphony Orchestra, under the direction of Mr. Richard Dirksen, provided a musical interlude, demonstrating the continuing progress of this fine musical organization.

One of the features of the Assembly which is rapidly becoming a tradition is the presentation of awards. This year's selection for the John Benjamin Nichols Award was the Junior League of Washington. Mrs. Richard B. Wathen, President of the League, was present to accept the plaque for her organization. Dr. Wallace M. Yater, Past President of the Society, long Editor of the Medical Annals, and leader in medical and civic affairs, was the recipient of the Certificate for Meritorious Service.

As usual, many hands made the Assembly possible. Dr. Alfred E. Brigulio, General Chairman, proved himself unusually qualified for his post. He had under his direction the following committees, the chairmen of which are indicated:

Program: Dr. Thomas M. Peery
Scientific Exhibit: Dr. James E. Fitzgerald
Television and Motion Pictures: Dr. Gordon S. Letterman

NICHOLS AWARD PRESENTED TO JUNIOR LEAGUE

President Watts presents the John Benjamin Nichols Award to Mrs. Richard B. Wathen, President of the Junior League of Washington, Inc., which was this year's selection for the award. The League was nominated by the Society's Committee on Public Information for its outstanding contributions to the health of the community.

Attendance: Dr. William O. Bailey, Jr.
Social Affairs: Dr. Edward E. Ferguson
Finance: Dr. Richard B. Castell

Ordinarily, it would be difficult to choose any one of these chairmen as deserving of special commendation. However, they would undoubtedly all agree that the "heart" of the Assembly is its scientific program, and that Dr. Peery and his committee did one of the outstanding jobs in the meeting's history. As has been mentioned, the near-capacity audiences which attended all sessions were testimony to this fact.

Finally, the Assembly is the high point in the Society President's year. Dr. James W. Watts, who presided so well at several scientific sessions and social affairs, like his predecessors, found it an exciting and exhilarating experience.

DR. YATER HONORED AT ANNUAL DINNER

Dr. Wallace M. Yater (left), Director of the Yater Clinic, Past President and retiring Chairman of the Executive Board of the District Medical Society, receives the Society's Certificate for Meritorious Service from President James W. Watts. The certificate, presented at the Annual Dinner, October 16, was awarded Dr. Yater "in recognition of his distinguished service to the medical profession and the people of the District of Columbia. Eminent author-editor and medical educator, he has attained a unique position of leadership in his chosen specialty—Internal Medicine. A doctors' doctor, he has deservedly won acclaim for his achievements throughout the medical world."

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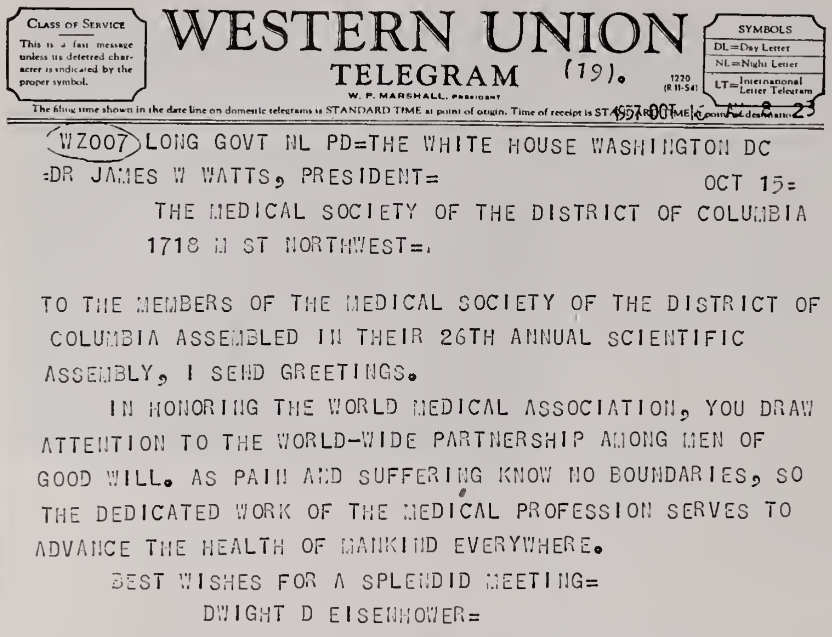
### *New Format Indicated*

In the past few years, succeeding chairmen of committees on arrangements for the Annual Scientific Assembly have taken a hard and objective look at the meeting with a view to suggesting improvements. Some have submitted their recommendations to the Executive Board in writing. The Board has considered them carefully and, where in its opinion practical, given its approval.

Few of those who attend the Assembly are aware of its unique nature. Although the Society is a constituent body of the American Medical Association and as such a state medical society, its jurisdiction is limited to an area comparable to that of a large county medical society. The Assembly's uniqueness stems from the fact that regardless of size no county medical society, to your Observer's knowledge, sponsors a comparable meeting. Meetings such as the Assembly are undertaken only by state medical societies which have component county societies on which to draw for support.

Obviously, then, the Assembly would not be possible except for a number of favorable factors. To begin with, there is a large concentration of physicians in the Washington Metropolitan Area. The Society's membership is now nearing the 2,200 mark. In addition, there are hundreds of physicians situated in or just outside the District of Columbia who are connected with Government departments and institutions and military establishments. There are also large cities nearby, many of whose physicians attend the Assembly regularly. Then, too, financial support by commercial exhibitors and business institutions has been all that could have been asked for. Vitally important have been the attraction Washington has held for physicians of national and international reputation and their availability as speakers. All of these factors have been a source of gratification to those responsible for the Assembly. Appreciating these fortunate circumstances, they are nevertheless of the opinion that the time has come when changes should be seriously considered.



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1957 OCT 16 AM 8 23

WZ007 LONG GOVT NL PD=THE WHITE HOUSE WASHINGTON DC
=DR JAMES W WATTS, PRESIDENT= OCT 15=
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA
1718 M ST NORTHWEST=,

TO THE MEMBERS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA ASSEMBLED IN THEIR 26TH ANNUAL SCIENTIFIC ASSEMBLY, I SEND GREETINGS.

IN HONORING THE WORLD MEDICAL ASSOCIATION, YOU DRAW ATTENTION TO THE WORLD-WIDE PARTNERSHIP AMONG MEN OF GOOD WILL. AS PAIN AND SUFFERING KNOW NO BOUNDARIES, SO THE DEDICATED WORK OF THE MEDICAL PROFESSION SERVES TO ADVANCE THE HEALTH OF MANKIND EVERYWHERE.

BEST WISHES FOR A SPLENDID MEETING=
DWIGHT D EISENHOWER=

CONGRATULATIONS FROM THE WHITE HOUSE

This is a reproduction of the congratulatory telegram which PRESIDENT DWIGHT D. EISENHOWER addressed to Washington physicians on the occasion of their 26th ANNUAL SCIENTIFIC ASSEMBLY.

The ASSEMBLY, like all other convention-type meetings, has changed very little in general format from the time of its inception. There are the scientific programs, scientific exhibits, and motion pictures, which remain pretty much the same as they have always been. Social events have varied very little from year to year. The same is true of technical exhibits.

Upon first thought, there does not seem much latitude for change in the ASSEMBLY structure and perhaps it would be the wiser course to leave well enough alone. However, a little investigation discloses that there is ample opportunity for initiating new features or at least revamping old ones. Furthermore, there is evidence that the same format year after year is beginning to pall on physicians who attend medical conventions regularly, and the ASSEMBLY is no exception.

The primary reason for the ASSEMBLY's existence, as it is of every other medical meeting, is to keep physicians abreast of medical progress. Generally speaking, this has been skillfully done by a number of program chairmen. However, except for the introduction of such new teaching mediums as television and varying papers with panel discussions, there would seem to be little opportunity at the moment for devising more effective presentations. Scientific exhibits do not now lend themselves to much change; neither do motion pictures.

With respect to the commercial, or what are called technical, exhibits it is quite a different matter. The companies who foot the bill for meetings such as the ASSEMBLY have for a great number of years been content with displays designed to sell their products to attending physicians. Perhaps little else can be done by the firms which display medical instruments, books and supplies. But the situation of drug companies that seek to interest physicians in the use of their products is quite different. As scientific exhibits their displays have had little significance. It is here, in your Observer's opinion, that there could be much improvement.

He believes that these exhibitors would find it an excellent investment to present truly scientific exhibits in which the development of and clinical results obtained in the use of their products are depicted. It would not only change the atmosphere of this part of the meeting but give a real lift to physicians in attendance. Monetarily, in your Observer's opinion, it would pay satisfying dividends to the exhibitors.

Now this idea did not originate with your Observer. Others have proposed it but, so far as is known, it has never really been tried. There could be no better place to pioneer in this field than at the Assembly.

Other features of the Assembly which have become routine are the social events. Just now the dinner for doctors' office staffs is on the ascendancy—the attendance being all that could be wished for. The Annual Dinner does not have the appeal it once had. Speakers, no matter how able, are not enthusiastically received. Perhaps the cocktail hour has sounded the death knell of dinners at which there is serious discussion. Already costly, this dinner with acceptable entertainment has priced itself out of existence. Is there a substitute? It has been proposed that a reception be substituted at which there would be ample opportunity for fraternization. Well, this too is something worth thinking about.

The opening-day luncheons sponsored by the Society have been invariably successful for the very good reason that they are "free." They have been an excellent attendance-stimulator and, at present, would seem indispensable to a successful meeting. That is also true of the luncheons sponsored by the George Washington and Georgetown Medical School alumni, which have had varying success attendance-wise.

These are some thoughts which come to mind about the Assembly and how it might be improved. There are, undoubtedly, many other and perhaps better ideas. Any member having suggestions to offer should forward them to the General Chairman for the 1958 Assembly, who will be appointed by January 1, 1958. Shortly thereafter he will organize his "team," and months of preliminary work for the next Assembly will get under way.

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### Annals *Reader Survey*

Physicians are so deluged with mail that little hope was held by the Editor of the Medical Annals for more than a token return of the questionnaires mailed to the membership last September to ascertain their views about the Society's publication. It was stated in the questionnaire that the readers' opinions were sought "for the purpose of a continuous improvement of the Medical Annals—in reading content, original articles, editorials, news, economics and other subjects pertaining to state-wide and national affairs. . . . "

A mild surprise was in store for the Editor and his associates when 198 members took time out to complete the questionnaire. Although this is less than 10 per cent of the Society's membership, those who are expert in making surveys state that it is sufficient to draw valid conclusions. Incidentally, surveys of all state medical journals represented by the State Medical Journal Advertising Bureau are being made at the request of advertisers in these publications.

The Annals has long been considered by those engaged in the state medical publication field to be one of the best journals of its type in the country. However, it has been several years since members of the Society, who receive it regularly, have had an opportunity to express themselves on the subject. The Editor, therefore, looked forward with anticipation and, undoubtedly, some apprehension to the results of the survey.

The questions asked in the questionnaire, a compilation of the replies to them, and some of the more pertinent comments follow:

*Should there be more or less—*

| | Scientific Papers | Editorials | Special Articles* | News Items and Personals | Book Reviews |
|---|---|---|---|---|---|
| More | 108 | 50 | 105 | 60 | 41 |
| Less | 16 | 43 | 35 | 53 | 58 |
| As is | 40 | 49 | 17 | 42 | 41 |
| No Comment | 25 | 45 | 34 | 37 | 50 |

* Social, economic and professional problems, etc.

Comment: Several said they favored an increase in the number of editorials but urged they be "more vigorous ones."

*Features to be Added or Increased?*

120 said they had no comment or thought the content should remain basically the same.

74 expressed views which added up to this: Most would like to see more and better scientific material published, including symposia, research studies, CPC's, and review articles. Several requested that more articles on socio-economic problems be published. There was a scattering of individual views on a variety of topics which will make interesting reading for the Editorial Board.

*Features to be Deleted or Decreased?*

158 had no opinion or thought none of the features should be deleted. Of the 36 who had comments to make, a few disapproved of each of such features as the pseudo-scientific articles, editorials and messages from the editors and officers. However, these objections were so diversified that their significance was doubtful.

*Favorite Department or Features?*

107 indicated their favorite department or feature. Of this number 32 listed the scientific section, 24 the Observer's column, and 16 the editorials. The remainder gave scattered approval to various other features. Here, too, the Editorial Board will find the comments illuminating.

*Do You Read the State Medical Journal?*

127 said they read it each month, 29 said frequently, 17 occasionally, and 10 no comment.

*Do You Read Advertisements?*

A surprising number—157—said they did so regularly or occasionally. The remainder said "rarely" or had no comment.

Answers to this and the previous question should please advertisers if, as believed, the number of readers holds percentage-wise throughout the Society's membership.

*Name Medical Journals You Read in Order of Interest.*

87 placed the ANNALS in first, second or third place in their reading; 70 listed the journal fourth, fifth and sixth; 10 placed it in seventh place. One member said, "Abolish it."

Needless to say, both the adverse and favorable comments in this survey will be taken into account by the Editorial Board. Many fine suggestions, as has already been indicated, were made which, for lack of space, could not be included here. They will receive the Board's attention early in January when it holds its annual meeting.

Again, the Editorial Board is fully aware that the MEDICAL ANNALS could be made a better publication. At present, all who are serving on the Board do so without compensation, except the Editor, who receives a very modest honorarium. Of the editorial staff, the Assistant Editor and her secretary are full-time; the Managing Editor serves the Society in many other capacities. Perhaps, in time, the journal will boast of a larger full-time staff which will permit the publication of a journal that will fully measure up to its potentialities.

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***Medical Writing in the Doldrums?*** At the recent State Medical Journal Conference held in Chicago, workshop sessions were devoted to such matters as publication format, makeup, headline treatment, composition, type style, use of color, advertising and medical writing. In the course of the discussion on the last subject, a publication expert stated that an editor should have a year's backlog of articles and other editorial material; that he could not possibly do a satisfactory job if he were continually "scraping the bottom of the barrel."

While agreeing that this was good advice, your Observer was certain there was not an editor of a state medical journal present who could boast that he met this requirement. This prompted him to ask that there be a show of hands of those who had more than a month's material ahead. Several, but not by any means a majority, indicated that they did. The chairman of the meeting then inquired how many had six months' backlog. Only three or four responded.

It would appear, then, that the situation which confronts the Editor of the MEDICAL ANNALS is far from unique among state medical journals. Usually, the bulk of the scientific articles which he has on hand are obtained from speakers who appear on the program of the ANNUAL SCIENTIFIC ASSEMBLY. In the past two or three years this has been a slim source of supply, because in 1954 the Society held a joint meeting with the Medical Society of Virginia, and in 1956 it cancelled the ASSEMBLY so as to lend its full support to the annual meeting of the Southern Medical Association. Some papers, it is true, were made available to the ANNALS following these meetings but they were very few. Thus, the "barrel" has been unusually bare these past many months. But, even under the best circumstances, the Editor has not been surfeited with too much scientific material. Certainly, he has never had more than a six months' supply.

In your Observer's opinion, this situation should not exist in what is rapidly becoming one of the world's great medical centers. It is true, of course, that many physician-authors wish to have their articles appear in national medical journals but, with persistent effort, there is no reason why the MEDICAL ANNALS should not rank alongside the best publications, national or otherwise, in this country. Perhaps this is visionary, but there is good reason to believe it is true.

Medical institutions of the Washington Metropolitan Area, in which much outstanding work is being done in the clinical and research fields, should be an excellent source of supply. An effort to increase contributions to the ANNALS by their staffs was made early this year when Consulting Editors were chosen to represent the principal institutions. It is too early to draw any conclusions as to the success which will attend the appointment of the consultants.

Considering the number of outstanding practicing physicians in the area, the output in medical articles is small indeed, and so far as can be ascertained, the situation is not improving. Obviously, there is a need to stimulate an active interest in medical writing among this group. If this were done, the ANNALS would certainly benefit.

As is well known to those who have done any writing to speak of, it is an art laboriously acquired. It isn't enough for the writer to be familiar with his subject matter. He must learn from practice to write simply, correctly and effectively. A modest handbook touching on the various aspects of this subject was given each participant in the State Medical Journal Conference. It is entitled, "A Group of Papers on Medical Writing," and is published by Parke, Davis & Company in Detroit.

One of the "papers" included is by J. Linwood Cutler, Associate Professor of Journalism at the University of Missouri, entitled, "Why Write?" That title poses a good question. Why should doctors want to write? Mr. Cutler answers this question as follows:

> "Doctors write because of one of several reasons. They may wish to record things for themselves. They may want to keep a diary; such as Samuel Pepys did, not suspecting that generations later someone would come along and crack his code. They may write to amuse and entertain themselves, and in this realm I believe they respond to some inner desire to prove to the world at large and to themselves that they are not only doctors but can excel in other fields, as well. (Doctors pride themselves on being able to fix a leaky faucet, build a set of concrete steps, paint a picture, write a first-class novel.) Doctors also write because they want to communicate to their fellows, others in their field, something they have discovered, experimented with, explored or invented. Thus, they want to share with all humanity.
>
> "Some doctors here and there possibly may want to write in order to increase their income. Such a person as A. J. Cronin felt that he could be happier by writing instead of practicing medicine. He answered the call and you all know how successful he is at it. There may be other reasons. The thing I want to impress upon you is this: just so long as a doctor writes for himself and himself alone, he need answer to no one for what he has done. Just as soon as he writes for others, he has the obligation to substantiate how well he has done his job. . . . "

Contributors to the above volume reiterate that a knowledge of English and its usage is not enough. Dr. Joseph Garland, distinguished Editor of the *New England Journal of Medicine*, urges the need for clarity, for he says:

> "The approach to a decent clarity in medical writing is not purely one of diction, of grammar, of the choice of words and the elimination of unnecessary and confusing ones, and of the arrangement of ideas. It goes deeper than that, to a matter of strategy, of overall planning, before tactical technics need even be considered. The field needs to be viewed through a wide angle lens in order that the subject may be seen as a whole, with its various parts in relation to each other.
>
> "Before one writes, if he is interested in clarity, he must give some thought to the design and object, if there is such, in this mighty volume of medical literature before pouring his own contribution into the current. The author will more readily achieve clarity, in the broad sense, if he has an appreciation of the reason, purpose or justification for his writing, as distinct from a mere motive. A reason or justification must by definition be good; a motive may be bad or unworthy in a variety of ways, the most persuasive of which is the mere getting of one's name into print."
>
> "I cannot escape the belief that clear writing demands some physical as well as a degree of intellectual effort on the part of the author; that the paper 'dictated but not read,' whether it says so or not, is stamped all over with its spurious trade mark. Some of the best writing of the last century and a half was done with a quill pen, the trimming of which, presumably with a pen knife, gave the writer a chance to decide what to say next, and how. The steel pen and the fountain pen have speeded up the process to its detriment; I have personally been spared the experience of trying to compose on a typewriter, but I have struggled with the garbled confusion that others have produced. The lead pencil that requires frequent sharpening is a comforting instrument, although the mechanical sharpener is to be deprecated.
>
> "It adds up to the fundamental thesis that to write clearly one must have something that needs to be written and the will to take pains in its writing. . . . "

These are merely samples of the advice given those who wish to become skillful in medical writing. One can't learn to write by reading about it, but suggestions of experienced and successful writers can make the would-be author's path easier.

### *A Prized Possession*

Commonplace though the name which identifies us may be, it is our most prized possession. It is the one thing that distinguishes us from our fellows. Most important is its sentimental association with family and friends. Its value cannot be measured in terms of eminence and accomplishment. Indeed, with few exceptions, we would prefer to live routine lives without recognition rather than part with the name which identifies us.

It is not surprising then that we resent slights to our name. Those who would demean it or cast doubt upon it are not easily forgiven. Those who take it too lightly also offend us. It is the latter category with which these comments are concerned.

No individual is more closely or intimately associated with those whom he serves than the physician. It is surprising then how often he is embarrassed because he cannot greet patients by name. Too frequently he cannot even identify those whom he frequently sees in his office and must rely upon an office assistant to come to his rescue. It is too bad if he meets patients outside his office! He may smile and say, "How are you—haven't seen you in a long time. Where have you been?" But the puzzled look in his eyes tells the patient that the physician is groping in his memory for a clue to his identity.

In his talks to senior medical students at Georgetown University School of Medicine, your Observer discusses, among other topics, the conduct of a doctor's office. He places particular emphasis on the importance of a proper relationship with patients in both professional and financial matters. In the course of this discussion, he stresses the necessity of remembering patients' names, how to pronounce them, and, very important, how they are spelled. There is nothing more irritating to a patient, or to anyone else for that matter, than to have his name mispronounced time and again and to receive mail in which his name is hardly recognizable. Not all of us are so fortunate as to have such readily pronounceable names as Smith and Jones. Those of us who possess unusual monikers are especially appreciative of the physician who is sufficiently interested in us to learn what our names are and how they are pronounced.

Now, your Observer would be the last to suggest that he is infallible when it comes to remembering names. Far from it! He too is baffled by an inadequate memory. Like many others, he complains, "I can remember faces but I have trouble with names." However, he does try to do something about this deficiency. As he long since discovered, the only solution to this problem can be summed up in one word—attention.

If we are genuinely interested in those we see, they will not be readily forgotten. The difficulty lies in the fact that unconsciously we sort people into those who for a variety of reasons interest us and those who do not. The latter frequently receive such casual attention that they fade from memory almost immediately. Obviously, this is no compliment to the individual involved, and one can readily understand his resentment if he becomes aware of it.

The physician who would win a patient's confidence and gratitude, therefore, will not overlook the importance to the patient of his name. He will make it a point, whatever the patient's station in life, to remember that to each one of us our identity is highly prized.

T. W.

## NEW COUNCIL FOR SCREENING FOREIGN MEDICAL GRADUATES

After nearly three years of planning the Educational Council for Foreign Medical Graduates has opened its offices in the Orrington Hotel in Evanston, Illinois. The executive director is Dr. Dean F. Smiley, Chicago, former secretary of the Association of American Medical Colleges.

It was decided three years ago that some form of evaluation service should be established within an independent agency whose affairs would be directed by a board of trustees designated by four coöperating organizations, the American Medical Association, the Association of American Medical Colleges, the American Hospital Association, and the Federation of State Medical Boards of the United States. For the next two years, the council will be supported by the four sponsoring agencies, the Kellogg Foundation, and the Rockefeller Foundation.

The Council, incorporated in the State of Illinois, will be administered by a 10-member board of trustees—two representatives from each of the four sponsoring agencies and two persons representing the public at large, one named by the U. S. Department of Defense and the other by the U. S. Department of Health, Education and Welfare. The president of the board is Dr. J. Murray Kinsman, dean of the University of Louisville School of Medicine.

Dr. Smiley said the Council will distribute to foreign medical graduates around the world authentic information regarding the opportunities and difficulties involved in coming to the United States on an exchange student visa to take intern or resident training in a U. S. hospital, or coming on an immigrant visa with the hope of becoming licensed to practice.

The Council will make available to properly qualified foreign medical graduates, while still in their own country, all information on how to obtain certification. This involves a three-way screening process:

1. The Council will certify that a student's educational credentials have been checked and found meeting minimal standards—18 years of formal education, including at least 4 years in a bona fide medical school, but excluding hospital training.
2. The Council will certify that the command of English has been tested and found adequate for assuming an internship in an American hospital.
3. The Council will certify that the general knowledge of medicine, as evidenced by passing of the American Medical Qualification Examination, is adequate for assuming an internship in an American hospital.

The Council also will provide hospitals, state licensing boards, and specialty boards which the foreign medical graduates designate with the results of the three-way screening. It also will accumulate and publish each year complete data regarding the numbers and placement of foreign medical graduates in this country.

The Council will not serve as a placement agency either for interns or residents; it will not attempt to evaluate the teaching program or inspect or approve any foreign medical school, and it will not act as an intercessor for foreign medical graduates having problems under discussion by state boards of medical licensure or specialty boards.

Tentative plans call for the first American Medical Qualification Examination for foreign medical graduates already in this country to be held in either February or March 1958; the second such examination for foreign medical graduates both here and abroad will be held in either July or August.

In discussing the Council's work, Dr. Kinsman said that the screening process was initiated to help maintain the present high medical standards in the United States by making sure that foreign-trained physicians wishing to come here for hospital appointments or practice have reached a level of educational attainment comparable to that of students in approved American medical schools at the time of graduation.

"At the same time," he added, "the Council hopes to encourage the well-trained foreign physician to take advantage of the opportunities to further his education in this country."

There has been a continuing influx of foreign-trained physicians to the U. S. for a long time. At present, there are more than 6,000 such physicians in this country on temporary visas serving as interns or residents. All foreign-trained physicians here on temporary visas are supposed to return to their native countries on completion of their internship or residency training.

In addition, there is another group of approximately 1,000 foreign-trained physicians who enter each year as immigrants or as American citizens returning after completing their medical education abroad.

## CHEMOTHERAPY AID FOR CANCER PATIENTS

Financial aid to needy patients for chemotherapy in the treatment of cancer is being extended to patients of private physicians as well as to patients in the 5 tumor clinics in the District of Columbia, according to Dr. C. Roger Kurtz, medical advisor for the chemotherapy committee of the D. C. Division of the American Cancer Society.

The financial aid, which has been available for the past year to cover chemotherapeutic agents of proven worth and necessary laboratory studies related to use of these agents, now also will include the cost of administration of blood and laboratory studies necessary for transfusions in connection with chemotherapy treatment.

Under the new plan, based on the experience of the past year, the aid will be limited to $100 per patient for a 3-month period. Reapplication can be made for another period at the end of 3 months.

The aid is available to ambulatory as well as to hospitalized patients who are being treated in the District of Columbia and who reside in the Metropolitan area. Application must be made to the District of Columbia Division, American Cancer Society, through the private physician or through one of the tumor clinics. Physicians should be able to assure the Cancer Society of the patient's financial need for assistance.

The chemotherapeutic agents approved by the committee include: aminopterin, amino-anfol, amethopterin, nitrogen mustard, tri-ethylene melamine, myleran, 6 mercaptopurine, urethane, stilbestrol, premarin or related estrogenic substance, testosterone, methyltestosterone, thiotepa, cortisone, hydrocortisone, prednisone, prednisolone, and adrenocorticotrophic hormone.

Application forms and further information can be obtained from Miss Helen Margaret Rogers, Director of Service for the Cancer Society, 810 18th Street, N.W., Washington 6, D. C.; telephone Executive 3-3690.

# A MILESTONE IN HEALTH EDUCATION*

JOHN D. PORTERFIELD, M.D.

*Deputy Surgeon General, United States Public Health Service, Department of Health, Education, and Welfare*

A Hall of Health offers an excellent device for imparting knowledge about health and disease. We in the Public Health Service are proud to have had a part in the rebirth of this section of the great Smithsonian Institution. The information on human anatomy and physiology presented here should have a substantial impact on the knowledge, and behavior, of the many thousands of visitors to the Institution each year.

Within the limits of time and space, the exhibit is probably among the best devices man has invented to communicate facts and ideas about the physical world. At its best, it combines the advantages of language and visual presentation in a specific and coördinated message with a high teaching potential. From the scratched stone drawings of ancient times to the sophisticated 3-dimensional clay models of today, exhibits have been used to teach and to stimulate interest.

Certainly, the exhibit has long been an important means of communication in the fields of science and medicine.

The first American scientific exhibit as it is known today was displayed at the annual meeting of the Indiana State Medical Association in 1899. It consisted of a large collection of pathologic specimens prepared by 2 Indianapolis physicians. It was such a great success that the 2 physicians displayed it that year at the meeting of the American Medical Association, which was held in Columbus, Ohio. Since 1900, the scientific exhibit has been an official part of the annual meeting of the AMA.

Today, every sizable group in the health field gives the exhibit equal status with scientific papers and other original presentations.

But exhibits also have broader and more general uses. As our society has become more complex, it has become necessary to use the exhibit not only as a professional and scientific tool but also as one of the means of reaching the general public. In 1904 the first tuberculosis exhibit for the general public was developed in Baltimore. It attracted Nationwide attention, and was soon followed by a similar display at the American Museum of Natural History in New York, where it was seen by thousands of visitors. The following year, the exhibit toured the Eastern states, under the sponsorship of the newly organized Tuberculosis Association and the guidance of one of the early disciples of visual health presentation, Evart G. Routzahn.

Since that time, the health exhibit has become a staple of numerous meetings and shows, and particularly of state and county fairs in rural areas. The modern era, however, ushered in many new and wondrous communications media, including films, film strips, radio and television. In comparison with these devices, the exhibit was thought to be obsolete and archaic as a health education technic. Enthusiasm for exhibits seemed to wane.

Yet in 1939–40, the special hall of "Medicine and Public Health" of the New York World's Fair drew an estimated audience of 7½ million people. A popular health fair, organized in 1954 in Miami, Florida by the American Medical Association, and participated in by the major professional, voluntary, and governmental health agencies of this Nation, attracted about 50,000 visitors in 4 days. There were comparable crowds at subsequent health fairs in such cities as Los Angeles, Cincinnati, and Oklahoma City.

I believe this is indicative of a number of things, but primarily of the tremendous popular interest in health matters. A recent survey, for example, revealed that newspaper readers wanted to see more articles on health than on any other single subject. Most of the major mass circulation magazines have special science and health departments. Popular pamphlets on health and hygiene reach millions of readers each year.

This reservoir of interest and awareness represents a challenge to us in public health as it does to you in the broad field of education.

As specialization in medicine and science becomes narrower and deeper, as new knowledge continues to emerge from laboratories and research institutions, and as modern life becomes increasingly complex, it is essential that we rely more and more on easily understood methods of communication.

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* Delivered at the opening ceremonies of the Hall of Health, Smithsonian Institution, in Washington, D.C., November 2, 1957.

Since World War II, the volume of medical research in this country has increased about 5-fold. We are beginning to make inroads on the problems posed by chronic illness and an aging population. Already, we see some of the signs. There are things that can be done to treat some forms of heart disease, tests that are of value in diagnosing some forms of cancer, new technics that are useful in the treatment of mental illness. Thus, the pool of information which demands interpretation and application will continue to grow.

To us in public health, this means that the specialist in communication, both of a written and visual nature, is an important member of the modern health team. This is evident in the growing number of these personnel who are taking their places on the staffs of voluntary and professional health organizations and of official agencies at all levels of government.

For many years, for example, the Federal Government has made use of exhibits to help convey useful information of all kinds, both to professional groups and to the general public. In the health field, the medical museum was started by the Army during the Civil War. For almost a century, this nearby neighbor of the Smithsonian has made significant contributions to medical knowledge through its exhibits. The Public Health Service, too, has found this technic of communication invaluable, as have state and local health departments.

For you in such great institutions as the Smithsonian, today's challenge is no less great. The exhibit will always have a place in health education. As long as a youngster's curiosity is whetted by a visual presentation of the marvelous mechanism that is the human heart, then you have a vital job. As long as there is zest for knowledge, then there is a need for new and better and more vivid ways of bringing that knowledge to people.

Certainly we need to know more about how people learn through visual experience. We need to know more about how to improve the presentation of facts and information and arguments through visual means. We need to know how to take advantage of the "teachable moment" that a superior kind of exhibit can make possible.

I know that you in the great Smithsonian Institution are doing your share toward strengthening this field and toward fashioning a museum as a modern place of learning. Bruno Gebhard, Director of the famous Cleveland Health Museum, has called a permanent health museum a "people's university," where visitors may see, study, and learn at their own pace and in their own way. I wish you many years of success in your New Hall of Health, your "people's university" for better health for more Americans.

## BOOKS RECEIVED

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interests of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

**Bacterial Fermentations.** H. A. BARKER, PH.D., Professor of Microbial Biochemistry, University of California, Berkeley, and Microbiologist, Agricultural Experiment Station. Pp. 95. New York: Wiley, 1957.

**Introduction to Anesthesia—The Principles of Safe Practice.** ROBERT D. DRIPPS, M.D., Professor and Chairman, Department of Anesthesiology, Schools of Medicine, University of Pennsylvania; Anesthetist, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania; JAMES E. ECKENHOFF, M.D., Professor of Anesthesiology, Schools of Medicine, University of Pennsylvania; Anesthetist, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania; AND LEROY D. VANDAM, M.D., Clinical Professor of Anesthesia, Harvard Medical School; Director of Anesthesia, Peter Bent Brigham Hospital, Boston, Massachusetts. Line drawings by Leroy D. Vandam, M.D. Price, $4.75. Pp. 266. Philadelphia: Saunders, 1957.

**Management of Complications in Eye Surgery: Avoidance of Pitfalls and Treatment of Difficult Situations in Ophthalmologic Operations.** Edited by R. M. FASANELLA, M.D., Chairman of the Section of Ophthalmology, Yale University School of Medicine, with contributions by 20 Authorities. Price, $16.00. Pp. 422, illustrated. Philadelphia: Saunders, 1957.

**The Chronically Ill.** JOSEPH FOX, Ph.D., Executive Director of the Home for Chronic Sick in Irvington, New Jersey. Price, $3.95. Pp. 229. New York: Philos. Libr., 1957.

(*Continued on page 670*)

# On the Lighter Side

The Holiday Season is upon us and what do we find? Santa Claus and his reindeer? No. Deep soft snow covering the branches of the trees and shrubs like ermine? Well, maybe. Gifts and toys piled high under the Christmas tree? Probably. Well, what DO we find? First of all, there are those tired, tired feet . . . tired from tramping through store after store, shop after shop, looking, searching and finally buying in desperation. Secondly, we have the aching back. Now, aching backs in themselves are not too uncommon, but around the Holiday Season the aching back becomes a symbol. Man, if you do not have an aching back around the Holiday Season you haven't been around the house and the Missus long enough to be useful. Women can find more darn things for a man to do! Thirdly, we have the Holiday Eyes. This means that you have lost so much sleep getting ready for Christmas that the large black rings under your eyes have developed colored highlights. Now, last of all, we find that our pocketbook is flat. And there is a definite promise of a flatter one when the December bills come cascading through the mail slot in early January.

I can remember Christmas as it was a good many moons ago. Thanksgiving was out of the way and the first real chill of the northern winds began to flow down from Canada. We children began to dream of Christmas.

I can see the white frame house with its huge kitchen, and the small "summer kitchen" tacked on as though it were an afterthought; the sturdy iron stove that held high its chimney as though to say, here and only here is the center of life and activity for the family!

That stove was a marvel of wizardry to a small boy. There were six round lids on the top of it that lifted out of their snug seats with the use of a special lid lifter. There was a sensible compartment above the flat of the stove where left-over food could be warmed, or just-baked bread could be stored. The baking oven, however, was something special to a small boy. Here he could thaw out his half-frozen feet after a long afternoon of slushing through the snow or sliding on the ice. Here he could sit and dream before the open warmth of it while his toes were toasted and his wet socks were dried.

Connected to the stove and directly by its side stood the water heater that supplied the hot water for baths that little boys need but never like to take.

Christmas in that house of memories was colossal. Of course, on Christmas Eve all the little people had to be in bed early. That was Mamma's orders. We undressed before the kitchen stove and changed to bedclothes—then, the wild race upstairs to jump into bed and pull the goose-down coverlets over one's head. That procedure was life-saving; otherwise the crisp coldness of the room would just about freeze off your ears.

No matter how brave and determined one was to remain awake until Santa came, for some unknown reason it was impossible. Even the exciting and strange sounds that floated upward from the mysterious goings-on downstairs could not prevent the Sandman from carrying out his appointed task.

I can remember the unbounded panic that would seize me when upon awakening suddenly on Christmas morning the thought would strike that I had overslept. However, on listening carefully and hearing no revelry downstairs, a little boy could bundle up warmly and sit on the top stair very patiently until the Christmas horn blew. Then what a rush to get downstairs! To be the first to see the TREE was quite an honor.

Every decoration on the tree, every ball and string of tinsel, no matter how worn and faded, looked to a boy on Christmas morning like something from On High. The clear, pine fragrance of the tree mingled with the strange odor of the sap that oozed from its branches was fascination itself. The garden with its conglomeration of trinkets was a wonderment and joy. The Christmas presents with their gay wrappings could be opened at last and happiness reigned supreme!

What a beautiful Christmas we had in those days!

J. Earl Kadan, M.D.

# News and Personals

## MEETINGS

**The James Stevens Simmons Memorial Lecture** will be delivered at the Surgeon General's Medical Meeting, January 16, 1958, at 8 p.m., in the Sternberg Auditorium, Walter Reed Army Medical Center. The lecture will be given by Dr. Jacques M. May, head of the Department of Medical Geography, American Geographical Society, New York City; his subject will be "The Ecology of Disease in World Health."

**The Washington Psychiatric Society** will hold its next meeting on January 17 in the Medical Society's building, at 8:30 p.m. Dr. Otto Klineberg, Professor of Psychology at Columbia University, New York City, will be present to speak on "Psychiatric Aspects of School Desegregation."

**Dr. Henry L. Darner** will show his pictures and describe his recent trip to Holland for the benefit of the **Florence Crittenton Home Building Fund.** The presentation will be held at the Woodward and Lothrop Auditorium, Wisconsin and Western Avenues, on Monday, January 6, beginning at 8:30 p.m. Tickets at $1.25 each are available from Mrs. Elmer L. Haberkorn, 5021 Glenbrook Terrace, N.W., Washington 16, D. C. Her telephone number is Emerson 3-4474.

Ophthalmologists are invited to attend the **Annual Clinical Conference of the Chicago Ophthalmological Society,** February 21–22, at the Drake Hotel in Chicago. Among the guest speakers will be **Dr. Lorenz E. Zimmerman,** of the Armed Forces Institute of Pathology, Washington, D. C. Registration for the course is $45 and should be paid to the Registrar, Mrs. Edward J. Ryan, 1150 North Lorel Avenue, Chicago 51, Ill.

**The Eighth Annual Meeting of The Guild of Catholic Psychiatrists** will be held at Catholic University on February 10 and 11, 1958. The program will include panel discussions on: Psychiatric Problems in Pastoral Practice; Morality and the Use of Somatic Practices in Psychiatry; Alcoholism; and Sanctity, Stability and Sanity. Members of the Medical Society of the District of Columbia are cordially invited to attend all the sessions.

The local Commitee on Arrangements for the meeting are: Dr. John R. Cavanagh, General Chairman; Drs. Thomas W. Murphy, Robert P. Odenwald and Anna Coyne Todd.

**The 59th Annual Meeting of the American Therapeutic Society** will be held at the Hotel Mark Hopkins in San Francisco, June 19–22, 1958. Dr. Austin Smith, Editor of the *Journal of the American Medical Association*, is Chairman of the Program Committee. All members interested in participating in the program should send the title of their paper together with 6 copies of a 200-word abstract to Dr. Oscar B. Hunter, Jr., Secretary, 915 19th Street, N.W., Washington 6, D. C. The final program will be completed on the deadline date, February 1, 1958.

## GENERAL NEWS

**The Executive Board of the Medical Society of the District of Columbia** held its regular meeting on October 21. Appreciation was expressed for a sizable check sent to the Executive Offices by Dr. Frank M. McChesney with only one stipulation, that it be put to the best use possible.

Dr. Robert S. Jason, Dean of the College of Medicine, Howard University, submitted to the Board the name of Dr. W. Montague Cobb, Professor and Head of the Department of Anatomy, for appointment to the list of Consulting Editors to the Medical Annals. The selection was approved by the Board and Dr. Cobb's name will appear on the masthead of the MEDICAL ANNALS as representing Howard University.

The Board confirmed the appointment of Dr. Russel S. Page, Jr. to serve on the Professional Vocational Rehabilitation Advisory Council to the Department of Vocational Rehabilitation of the District of Columbia. Dr. Page, who will represent the field of otolaryngology on the Council, succeeds Dr. Aubrey D. Fischer.

Tentative dates for the Medical Society's 27th ANNUAL SCIENTIFIC ASSEMBLY are November 24, 25, and 26, 1958, to be held at the Hotel Statler.

**Dr. Oscar B. Hunter, Jr.** took office as President of the **American Association of Blood Banks** during its annual meeting in Chicago, November 5.

It was voted at this meeting to move the offices of the Association to Chicago, Illinois, in view of the resignation of Miss Marjorie Saunders, of Dallas, Texas, who was elected Secretary at the Association's organizational meeting in Dallas in November, 1947. The transfer of the office to Chicago is expected to be effective before January 1, 1958.

During the meeting, Baylor University Hospital of Dallas received a citation, which will be permanized in a bronze plaque, in commemoration of the founding of the Association. The Blood Bank Institute, sponsored by Baylor University Hospital and its Board of Trustees in November, 1947, resulted in the origin and development of the Association of Blood Banks.

**The District Branch of the National Academy for Religion and Mental Health** was organized in Washington at the Dupont Plaza Hotel, October 23. Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, was elected Temporary Chairman. A five-member board was selected, namely, Dr. Robert P. Odenwald; the Reverend Wilbur F. Wheeler, Catholic Chaplain at St. Elizabeths; the Reverend E. Felix Kloman, former Dean of Episcopal Seminary in Alexandria, Va.; the Reverend James Vander Veldt, of Catholic University; and Miss Marian V. Ham, Secretary.

The parent body was founded in New York City in 1954 and recently received a Federal grant of about $500,000 to assist in the work of coördinating the fields of psychiatry and religion.

At the **11th Annual Meeting of the D. C. Division of the American Cancer Society,** October 21, the following physicians were elected to its Board of Trustees: Dr. J. Keith Cromer, Chairman of the Cancer Control Committee of the D. C. Medical Society, and Dr. Charlotte P. Donlan, Assistant Clinical Professor of Radiology, George Washington University School of Medicine. Among those reelected to serve on the Board were Drs. Ernest A. Gould and Raymond T. Holden.

Following the general meeting, the Board of Trustees met to elect officers and members of its Executive Committee. All officers of the Society were reëlected to office for a one-year term. They are: Dr. Calvin T. Klopp, President; Wylie W. Barrow, Vice President; Philip A. Hanigan, Jr., Secretary; and Frederick P. H. Siddons, Treasurer. Among members added to the Executive Committee were the following members of the D. C. Medical Society: Drs. Murray M. Copeland, Paul B. Cornely, William P. Herbst, Harry H. Kerr, Harold W. Krogh, and C. Roger Kurtz.

**George Washington University** has been allotted $45,000 from new grants totaling $3,698,452 by the Public Health Service. The grants, announced November 15, were awarded to 39 institutions in 22 states, the District of Columbia and Hawaii, to be used for expansion of the Nation's health research facilities. Each institution is required to spend at least as much from its own sources for research construction and equipment as it receives from the Federal Government.

**Dr. Henry Grattan Doyle,** Professor Emeritus of Romance Languages at George Washington University, has been elected President of the **Hospital Council of the National Capital Area, Inc.**

Professor Doyle, who is also former Dean of the Columbian College at the University, is a member of the Board of Incorporators of Garfield Memorial Hospital, and is presently serving as Chairman of the School of Nursing Committee of that institution.

**Colonel Charles R. Mueller, MC, USA** (retired), was installed as President of the **Association of Military Surgeons of the United States** during its 64th Annual Convention, held at the Hotel Statler, October 28–30. Dr. Mueller is the Director of Medical Service, Veterans Administration Department of Medicine and Surgery, which position he has held since April, 1954.

**Colonel Thomas W. Mattingly** was named Chief of the Department of Medicine at Walter Reed Army Hospital in October. The new assignment is in addition to his duties as Chief of the Cardiology Service, a post which he has held since 1951.

On November 1, Colonel Mattingly was promoted to Brigadier General.

General Mattingly is a graduate of Georgetown University School of Medicine, where he is now Assistant Professor of Medicine. He enlisted in the Army Medical Corps in 1934 and gave distinctive service during World War II. During the past 6 years he has been consultant to President Eisenhower's physician and to the Surgeon General of the Army.

General Mattingly has appeared on many programs sponsored by the District Medical Society. At the 26th ANNUAL SCIENTIFIC ASSEMBLY in October he presented "Problems in Cardiovascular Disease" in connection with the large color-screen telecast from Walter Reed.

**The District of Columbia Association for Mental Health** has moved to new headquarters at 3000 Connecticut Avenue, N.W., Suite 435. The telephone number is Hobart 2-1122.

**The Doctors' Symphony Orchestra concert,** originally scheduled for December 21, has been cancelled.

## PERSONALS

Dr. **Ralph M. Caulk,** Past President of the District Medical Society and Senior Radiologist at Garfield Memorial Hospital, has been elected Chairman of the Medical Board of the new Washington Hospital Center, which office carries with it the responsibilities of President of the Medical Staff.

Dr. **Addison M. Duval,** Chairman of the Commissioners' Youth Council, and Dr. **George Maksim,** Chairman of the Committee on Public Information of the D. C. Medical Society, were selected by the District Commissioners to serve on a 14-member citizens' committee which will sponsor a District Conference on Youth Fitness. The group has been set up in compliance with the request of President Eisenhower that such conferences be held throughout the country to recommend ways of keeping American youth mentally and physically alert. Mr. Milo F. Christiansen, District Recreation Director, is chairman of the committee.

Dr. **C. Willard Camalier** was installed as President of the American Academy of the History of Dentistry at its annual meeting in Miami Beach, Florida, in October. Dr. Camalier, who is an Associate member of the D. C. Medical Society, is Past President of the District Dental Society and the American Dental Association.

Dr. **John O. Nestor** is one of 43 physicians in the country selected as charter members for a new Section in Pediatric Cardiology of the American Academy of Pediatrics. The section was organized, October 6, in Chicago, during the annual meeting of the Academy.

Dr. **M. Noel Stow** has been appointed to the faculty of the Home Study Courses of the American Academy of Ophthalmology and Otolaryngology. He is also Co-chairman of its Section on Embryology, Anatomy and Neuroanatomy of the Eye.

**Drs. W. Montague Cobb and Montgomery Blair, Jr.** have been reëlected Chairman and Vice Chairman, respectively, of the District's Public Health Advisory Council. The election was held at the Council's first fall meeting, September 24.

Dr. **Murray M. Copeland,** Professor and Director of the Department of Oncology, Georgetown University Medical Center, was elected to the Board of Directors of the American Cancer Society at its annual meeting in New York, October 28–November 1. Reëlected to the Board was Dr. **Calvin T. Klopp,** President of the D. C. Division of the American Cancer Society and Director of the George Washington University Cancer Clinic.

## CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

| *Date* | *Speaker* | *Subject or Title* | *Organization* |
|---|---|---|---|
| September 10 | Dr. Benjamin Karpman | The Real and the Imagined in Psychiatry | Samuel Gompers Masonic Lodge |
| October 10 | Dr. Peter A. Santucci | Personality from the Cradle to Now | Glenmar Women's Club |
| October 10 | Dr. Benjamin Karpman | The Upper and Lower Limits of Psychotherapy | College Alumni Club |
| October 21 | Dr. Marvin E. Perkins | Panel discussant on Mental Health Consultation | Middle Atlantic Regional Group, American Association of Psychiatric Clinics for Children |
| November 4 | Dr. Benjamin Karpman | Being Born and Living Through | Jewish War Veterans, Post 707, Wheaton, Md. |
| November 8 | Dr. Wyrth P. Baker | The Relation of Antibiotics to Homeopathic Drugs and Therapy | Homeopathic Laymen's League of Washington, D.C. |
| November 11 | Dr. S. Ross Taggart | Venereal Diseases | Pulse Beat Program, Station WWDC |
| November 11 | Dr. Donald R. Sickler | Tuberculosis | Steve Allison Show, Station WWDC |
| November 19 | Dr. Julius Schreiber | Modern Woman and Her Emotional Fulfilment | Fairfax County League of Women Voters |

**Dr. Walter A. Bloedorn** was elected President of the **Gorgas Memorial Institute of Tropical and Preventive Medicine** at its annual meeting in October. Dr. Bloedorn, who is also President of the National Board of Medical Examiners, succeeds Colonel Joseph F. Siler.

**Dr. A. Earl Vivino,** Medical Director of Georgetown University Health Service, has been reëlected President of the D. C. College Health Association.

**Dr. Everett J. Gordon,** medical director of the Metropolitan Police Boys' Club, received a Citation for Meritorious Service from the Club for his contribution of time and services during the 1957 camping season. Major Ernest W. Brown, formerly Chief of Police, who founded the Club in 1934, made the presentation.

**Mr. Douglas Tschiffely**, proprietor of Tschiffely Brothers Drug Store until his retirement 6 years ago, died, October 21, at his home, 2844 28th Street, N.W.

Mr. Tschiffely was born in Beltsville, Maryland, in 1883. He graduated from George Washington University School of Pharmacy, and taught at the school after his graduation.

He took over operation of the drug store at 1224 Connecticut Avenue, N.W., from his brother, the late Stuart Tschiffely, about 35 years ago. The Tschiffely brothers, Douglas and Stuart, were well known to most Washington physicians and to Washingtonians for a store unique in its dispensation of drugs only.

## DANIEL WEBSTER PRENTISS, M.D., F.A.C.S.

### (1874–1957)

Dr. Daniel Webster Prentiss, Washington surgeon for many years, died, October 20, 1957, at his home at 5425 Connecticut Avenue, N.W. A Life member of the Medical Society of the District of Columbia, he was retired from practice.

Dr. Prentiss was a native Washingtonian, born September 9, 1874. He graduated from Columbian University (now George Washington University) Medical School in 1899. He also held a Bachelor of Science degree from the same institution, which he received in 1895. For several years he was Professor of Histology, Embryology and Hygiene at George Washington University.

Dr. Prentiss was formerly on the dispensary and surgical staff of Emergency Hospital and on the surgical staff of Casualty Hospital. He held the rank of Captain in the Army Medical Corps during World War I, serving overseas at Base Hospital No. 6 in France.

In 1900 he was elected to membership in the D.C. Medical Society, becoming a Life member in 1941. He was a Fellow of the American College of Surgeons, and a member of the Chevy Chase Presbyterian Church and the Chevy Chase Masonic Lodge.

He is survived by his wife, Mrs. Kathryn Brown Prentiss.

## ALBERT RHETT STUART, B.A., M.A., M.D.

### (1878–1956)

The Medical Society has just been notified that Dr. A. Rhett Stuart, a Life member, died, December 12, 1956. His last address in Washington was 1862 Mintwood Place, N.W., moving from there to Baltimore.

Dr. Stuart was born in Charleston, South Carolina, in 1878. His father was the Rev. Albert Rhett Stuart, D.D., an Episcopal clergyman, and his mother was Sophia Clarkson Stuart. He attended Emerson Institute in Washington, D. C., and later enrolled at Trinity College in Hartford, Connecticut, where he earned both his B. A. and M. A. degrees.

In 1902 Dr. Stuart graduated from the University of Virginia School of Medicine. He interned at Chambers Street Emergency Hospital in New York and was resident and later Chief Resident at St. John's Hospital in Brooklyn, New York. He began the general practice of medicine in the District of Columbia in 1905.

Dr. Stuart was elected to Active membership in the Medical Society of the District of Columbia in 1895 and became a Life member in 1936.

He is survived by his wife, Mrs. Carolyn Stuart.

## CLARENCE SUMNER GREENE, D.D.S., B.S., M.D.

### (1901–1957)

Dr. Clarence Sumner Greene, Chief of Neurosurgery at Howard University College of Medicine, died unexpectedly, October 9, 1957, at Freedmen's Hospital.

Dr. Greene was a Washingtonian, born, December 26, 1901, to Samuel B. and Pharien Gordon Greene. He graduated from Dunbar High School, where he was on the track and basketball teams. Embarking on a career in dentistry, he received his degree in dental surgery from the University of Pennsylvania in 1926. He continued his studies at Harvard University and the University of Pennsylvania, receiving the degree of Bachelor of Science from the latter in 1932.

Turning to medicine, Dr. Greene enrolled for medical study at Howard University, and graduated in 1936. He interned at Cleveland City Hospital the following year and served a two-year residency at Douglass Hospital in Philadelphia from 1937 to 1939. The latter year he returned to Howard University to teach in the Department of Surgery. In 1950 he was promoted to Associate Professor of Surgery and Chief of Neurosurgery. A decade later he spent two years (1947–49) in postgraduate study of neurological surgery at McGill University.

Dr. Greene was a diplomate of the American Board of Surgery, a Fellow of the American College of Surgeons, an Active member of the District Medical Society since 1953, and a member of the Medico-Chirurgical Society of D. C. and the Charles R. Drew Surgical Society.

His home was at 3939 Military Road, N.W. He is survived by his wife, Mrs. Evelyn Gardner Greene, a son, Clarence S. Greene, Jr., and a daughter, Miss Carla Greene, all of the home address.

## FRANCIS LOUIS ZINZI, B.S., M.D.

### (1914–1957)

Dr. Francis L. Zinzi, Arlington pediatrician, died suddenly at his home, 2909 North Second Road, October 25, 1957. He was an Associate member of the District Medical Society.

Dr. Zinzi was born in New York City, November 23, 1914, to Louis and Angelina Zinzi. He received his early education in New York City and graduated from St. Bonaventure College at St. Bonaventure, New York, in 1936. He enrolled at Georgetown University School of Medicine for his medical training, graduating in 1940. He interned at Georgetown University Hospital, following this with a year's residency in pathology, also at Georgetown. The next three years, 1943–46, during World War II, he served as Captain in the Medical Corps of the United States Air Force. He returned to Washington to specialize in pediatrics, serving as resident physician at Children's Hospital from 1946 to 1948.

He was associated in the practice of pediatrics with Drs. Frank J. Murphy and Jerome Imburg, with offices in the Shirlington Theater Building in Arlington. He was on the staff of Georgetown University School of Medicine as Clinical Instructor in Pediatrics.

Dr. Zinzi was elected to Associate membership in the District of Columbia Medical Society in 1948. He was a member of the American Academy of Pediatrics, the American Medical Association, the Arlington County Medical Society, the Georgetown Clinical Society, the Catholic Physicians Guild, and the John Carroll Society. He was Treasurer of the Northern Virginia Pediatric Society.

Surviving him are his wife, Mrs. Kathryn Casey Zinzi, and four children, Louis, Francis, Thomas and Catherine, all residing at home.

## BERNARD GILL McLAUGHLIN, M.D.

### (1926–1956)

Belatedly has come word of the death of Dr. Bernard Gill McLaughlin, Resident-Intern member of the D. C. Medical Society, who died over a year ago, March 18, 1956.

While in Washington, Dr. McLaughlin was on the staff of Veterans Administration (Mt. Alto) Hospital. In 1954 he transferred to New England Deaconess Hospital in Boston. At the time of his death he was engaged in private practice, with offices at 1492 Elm Street, Manchester, New Hampshire.

Dr. McLaughlin was born in Manchester, N. H., July 17, 1926, the son of John and Margaret McLaughlin. He received the degree of Bachelor of Science in biology from Holy Cross College, Worcester, Massachusetts, in 1946, and graduated from Georgetown University School of Medicine in 1951. He spent one year each as intern and resident at Georgetown Hospital.

He was elected to Resident-Intern membership in the D. C. Medical Society in 1953. He held membership in the American Diabetes Association.

He is survived by his wife, Mrs. Eileen Alice McLaughlin.

## THOMAS VICTOR HAMMOND, M.D.

### (1886–1957)

Dr. Thomas Victor Hammond, who formerly practiced medicine in Washington, D. C., died, September 28, 1957, in San Francisco, California, where he had lived since 1941.

Dr. Hammond was born in Washington, D. C., July 23, 1886. His father, the late Dr. Thomas V. Hammond, Sr., had practiced medicine in the District of Columbia for 40 years and was the second resident physician at Providence Hospital. Both father and son were graduates of Jefferson Medical College; the latter was a member of the Class of 1908. Following graduation, Dr. Hammond was resident physician at Providence Hospital in Washington from 1909 to 1910. He began practicing medicine in the District of Columbia in 1912 in offices at 1713 H Street, N.W.

Dr. Hammond was elected to Active membership in the Medical Society of the District of Columbia in 1915 and transferred to Associate membership in 1918. He resigned in 1941 when he moved to California.

Surviving him are his wife, Mrs. Adelina Laurenzi Hammond; a brother, Edward H. Hammond, of Burley Manor, Md.; and two sisters, Mrs. William Whaley, of Berlin, Md., and Mrs. Albert Vick, of Philadelphia.

### Diuretics and Renal Disease—Schreiner

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N.B. Gratitude is due Gerald Rosenthal, Phyllis Straub, Moira McClain, and Rosalie Mancuso for technical assistance. Thanks are due the many physicians who referred patients for this study.

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(*Continued from page 662*)

**The Function of the Ureter and Renal Pelvis. Pressure Recordings and Radiographic Studies of the Normal and Diseased Upper Urinary Tract of Man.** From the Institute for Experimental Medical Research, University of Oslo, and Dept. III, Ullevål Hospital, Oslo, Norway. Head: Professor of Surgery Carl Semb, M.D. Fredrik Kiil, M.D., Research Associate, Institute for Experimental Medical Research, University of Oslo; Assistant in Medicine, Ullevål Hospital, Oslo, Norway. Price, $7.50. Pp. 205, illustrated. Philadelphia: Saunders, 1957.

**Manual of Nutrition.** Prepared by Scientific Adviser's Division (Food) of the Ministry of Agriculture, Fisheries and Food of Great Britain. Price, $3.50. Pp. 67. New York: Philos. Libr., 1957.

**Fear: Contagion and Conquest.** James Clark Moloney, M.D. Price, $3.75. Pp. 140. New York: Philos. Libr., 1957.

**A Text-Book of X-ray Diagnosis.** By British Authors. In Four Volumes. Third Edition. Volume I. Edited by: S. Cochrane Shanks, M.D., F.R.C.P., F.F.R., Director, X-ray Diagnostic Department, University College Hospital, London; and Peter Kerley, C.V.O., C.B.E., M.D., F.R.C.P., F.F.R., D.M.R.E., Director, X-ray Department, Westminster Hospital; Radiologist, Royal Chest Hospital, London. Price, $18.00. Pp. 521, with 533 illustrations. Philadelphia: Saunders, 1957.

**Veterinary Pathology.** Hilton Atmore Smith, D.V.M., M.S., Ph.D., Head of the Department of Veterinary Pathology, School of Veterinary Medicine, A & M College of Texas; Consultant to the Armed Forces Institute of Pathology; Consultant to the Stanford Research Institute; Lecturer (Pathology) to the School of Medicine, University of Texas (Galveston), and Thomas Carlyle Jones, B.S., D.V.M., Lt. Col., U. S. Army Veterinary Corps; Chief, Veterinary Pathology Section, Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington, D. C. Price, $17.50. Pp. 959, with 661 illustrations on 262 figures and a color plate. Philadelphia: Lea, 1957.

**The Story of Peptic Ulcer.** Conceived by Richard D. Tonkin, M.D., F.R.C.P., Westminster Hospital, London. Characterized by Raymond Keith Hellier, F.R.S.A. Price, $2.25. Pp. 71. Philadelphia: Saunders, 1957.

**Transactions of the Annual Meeting of the American Society for Artificial Internal Organs,** Chicago, Illinois, April 14–15, 1957. Volume III. Printed by the Georgetown University Printing Department for the American Society for Artificial Internal Organs. Pp. 96.

# *Book Reviews*

**Goepp's Medical State Board Questions and Answers,** 9th edition. HARRISON F. FLIPPIN, M.D. Price, $8.00. Pp. 569. Philadelphia: Saunders, 1957.

This book has been published for many years by the W. B. Saunders Company. This ninth edition was published in 1957, and the last previous edition in 1950. The present author, Harrison F. Flippin, M.D., assisted Dr. Goepp, the original author, for many years in the work on this book. I reviewed the last edition as well as this, the ninth, and believe that this book belongs in the library of all medical societies, medical schools, and teaching hospitals. The book will assist neophytes in taking basic science and clinical work in both state and National Board examinations. However, the absence of any objective-type questions will prevent the fullest use of the book.

As is stated in the preface, many new developments in medicine have occurred since 1950. It is therefore of utmost importance to keep the reference books of Medical State Board questions and answers up to date in these fields where there is rapid evolution of new information. In spite of adding new data the present edition, well printed on good paper, is about 100 pages shorter than the eighth edition. The Table of Contents and Index are quite helpful. The division by sections in the Table of Contents is at times artificial (e.g., Surgery and Complications of Surgery).

In the field of anatomy there is very little of any new information since the old edition; the same is true of pathology, chemistry and physiology, pharmacology, clinical pathology, many portions of the sections on medicine. The section on public health and preventive medicine and many portions of the sections on surgery, complications of surgery, obstetrics and gynecology, and medical jurisprudence contain very standard information.

Minor errors and omissions occur; for example, the preface states that information on stilbamidine, which is described as a new antimicrobial agent, is included. However, on looking through the book I could find no data on stilbamidine whatsoever. Data on steroids, new antihypertensive agents, new surgical technics, and the newer diagnostic measures are included. Data on drug therapy in psychiatry are included.

On page 93 a discussion of cirrhosis fails to mention postnecrotic cirrhosis. On page 507 one reads that the very old and very young tolerate excessive heat better than young adults. On page 410 one might feel the answer regarding the indications for thyroidectomy contained controversial data; but there are little controversial data elsewhere in the book.

In summary this is a very good book. Addition of sample objective-type questions might allow still greater use of the book.

ELBERT T. PHELPS, M.D.

**Clinical Gastroenterology.** EDDY D. PALMER, M.D., F.A.C.P. Illustrations by Phyllis Anderson. Price, $18.50. Pp. 630, with 216 illustrations. New York: Hoeber-Harper, 1957.

To add another book to the already overcrowded array of volumes on the subject of gastroenterology, one must present scientific material of such recent origin that it may tend to add a new light to many past principles or conceptions in that field, or provide such a different and radical approach to that well-worn subject that the new tome may take its place among the rest as a valuable contribution to the series. The author, who has been a prolific contributor to medical literature, makes a strong and effective plea for a clinical approach to the subject, which he terms "comprehensive gastroenterology." He defines this as "the art and science of managing together both the emotional and organic aspects as a psychovisceral complex." Despite the unfortunate medical jargon, this is not a new approach nor a startling assumption. Without a doubt, such an approach does have the complete and unstinted approval of all practicing physicians and medical teachers today. Consequently, one undertakes the perusal of this large and imposing text of over 600 odd pages with considerable curiosity and interest.

The author's style is conversational and facile so that one is carried along with the feeling that he is conversing with a mutual medical friend of considerable knowledge, keen clinical judgement, and a wealth of factual material. Dr. Palmer has a marked propensity for eponyms and the book as a consequence is studded with innumerable allusions to personal names attached to anatomical areas, disease syndromes, surgical incisions, etc. This does not detract unduly from the interest of the book although it does become rather pedantic at times.

When the chapter on duodenal ulcer is reached, it becomes quite obvious that the author did not adhere to his original premise. He has advocated "comprehensive gastroenterology" throughout the book but in his eagerness and enthusiasm to press his point he seems to have thrown out of the window not only the dirty water but the baby as well! No one would wish to disagree with him when he emphasizes that ". . . the goal . . . is to have the patient reveal to himself the influence that emotional factors have been exerting on his total illness." But when he categorically declares ". . . there is no virtue in dietary treatment . . . and ordinarily no prescription and no restrictions need be imposed . . . ," one searches in vain for his controlled experiments to bear out these assumptions! Is this intuitive judgment being exercised by the author or scientific validation? With a few strokes of the pen, he summarily obliterates all the physiologic evidence that has been brought to bear on the peptic ulcer prob-

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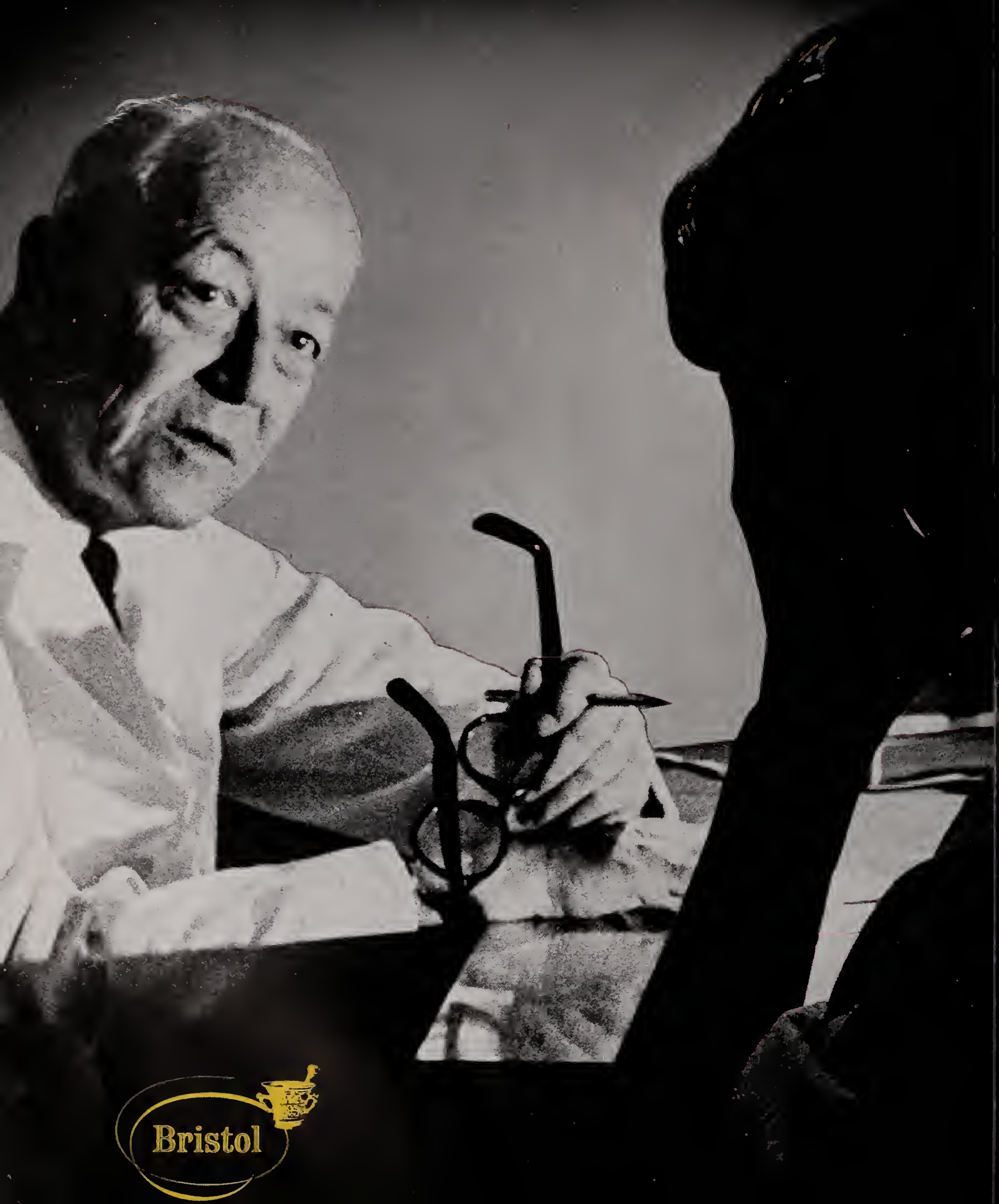

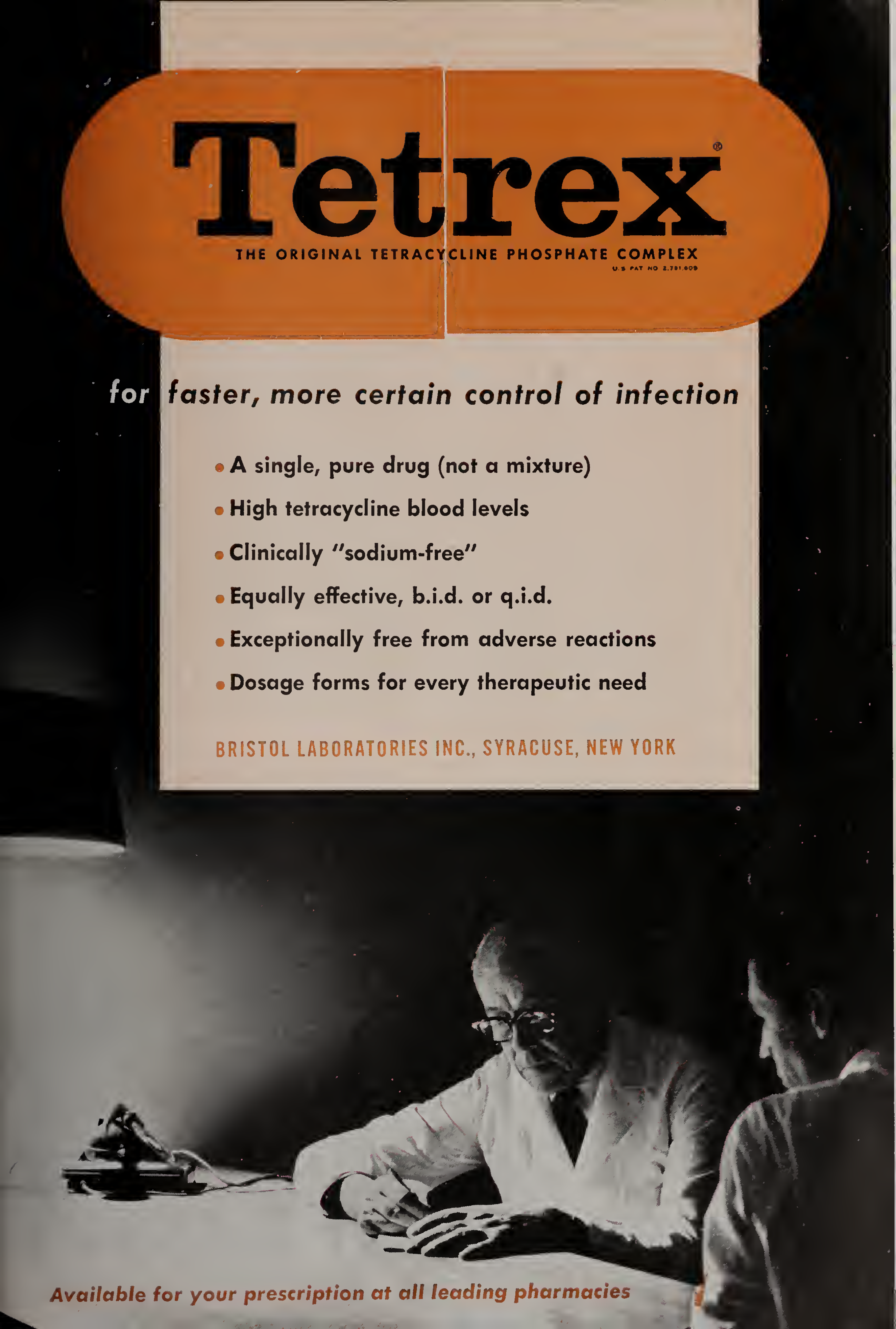

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*(Continued from page 41)*

lem. It is scientifically imperative that significant assumptions or principles enunciated in a medical textbook be supported by truly objective observations, with a serious endeavor being made at all times to consider the distorting effects of personal bias. In the present instance, this does not appear to have been done by the author. This constitutes a definite weakness in an otherwise interesting, readable and informative book. The final impression left was that the author meant this to be a "personal" gastroenterology and not a "comprehensive" gastroenterology.

Peter D. Comanduras, M.D.

**Clinical Proctology,** 2nd edition. J. Peerman Nesselrod, B.S., M.S., M.Sc. (Med.), M.D., F.A.C.S., F.A.P.S. Price, $7.00. Pp. 296, with 72 figures. Philadelphia: Saunders, 1957.

This book is designed for medical students, residents, generalists, internists, and those doing general surgery. Source of material is the author's experience, Mayo Clinic data, and general literature. Its 16 chapters cover anatomy, physiology, diseases, diagnosis and treatment of the anorectal area. Emphasis is placed on the diseases most often seen, i.e., anal infection, fissure, fistula, contracture, pruritis, hemorrhoids, rectal prolapse, malformation, neoplasia, and miscellaneous subjects. Conservative and minor surgical treatment is explicitly covered without attempting more than brief mention of major surgical treatment.

This well-written book holds the reader's attention, allowing easy, rapid reading. It is particularly instructive to residents, giving explicit instructions in patient handling and of pre- and postoperative care of anal procedures. Methods of diagnosis and treatment are explained rationally in terms of anatomy, physiology and pathology. This is particularly well done.

A fuller discussion of hemorrhoidectomy technics would improve that section. The author presents the more aggressive approach, as evidenced by his statements and his recommendations for very heavy postoperative sedation. The method of treating polyps by electrocoagulation without excision for microscopic study cannot be recommended, despite the reasons given. In light of increasing recognition of its danger, radiation therapy of pruritis ani should be abandoned, particularly since better local means are being developed.

This book succeeds in its intent to instruct medical students, residents, internists, generalists, and general surgeons, and is a useful, highly recommended addition to any library.

Frederick Y. Donn, M.D.

**Psychosomatic Medicine. A Clinical Study of Psychophysiologic Reactions,** 3rd ed. Edward Weiss, M.D., and O. Spurgeon English, M.D. Price, $10.50. Pp. 557, with 8 figures. Philadelphia: Saunders, 1957.

Any physician who has not studied at least one of the 3 editions of this pioneering text has neglected his postgraduate education and missed an opportunity to enjoy a well written discussion of a fundamental aspect of medicine. To be sure, there are other books which deal with the complex psyche-soma interrelationships, but none as comprehensive in scope.

In the 14 years since the first edition appeared, extensive and highly significant investigations have thrown light upon the integrative mechanisms which make the mind-body duality a truly indivisible entity. This new edition incorporates what appears sound in recent research. The book is divided into 2 parts. The first deals with the general aspects of psychosomatic phenomena, including the genesis of psychopathology, the technics of diagnosis, and the principles of appropriate psychotherapy. The second section is devoted to the psychosomatic element in diseases involving the various body systems. This part contains 15 comprehensive chapters pertaining to cardiovascular, gastrointestinal, endocrine, genitourinary, respiratory, nervous, cutaneous, surgical, dental, and orthopedic problems. Numerous carefully selected and pithily presented case examples add clarity to the interdependence so significant to accurate, comprehensive diagnosis and effective therapy.

The first edition of this book, which so sanely joins the disciplines of somatically and chemically oriented internal medicine and psychiatry, was good. This newest edition is better. The authors have grown even wiser with the years.

Edward J. Stieglitz, M.D.

**Ciba Foundation Symposium on Ionizing Radiations and Cell Metabolism.** G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $9.00. Pp. 318, with 48 illustrations. Boston: Little, 1956.

This is another of the excellent "Ciba—Symposia."

It deals with the effects of ionizing radiations and radiomimetic agents on cell metabolism. Up to the present time, the observations on histopathologic changes and chemical studies on in vitro systems did not lead to any satisfactory explanations of how the various recognizable effects were brought about. The link between chemical changes and biological consequences is by and large unknown. Therefore, research in a comparatively new line of approach is aimed at the elucidation of radiation effects on living cells and organisms. This research—by necessity still in an early stage—is directed toward the systematic analysis of biochemical systems and has to deal, for instance, with radiation effects on enzymes, on nuclear and protoplasmatic metabolism, on proteinsynthesis and their control mechanisms. The problems are manifold and very complex. The wealth of

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## Book Reviews

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the material presented makes it virtually impossible to review the symposium in detail.

It is to be hoped that this research may lead to a more tangible knowledge of problems such as ageing, heredity, genetics, mutagenic mechanisms, and carcinogenesis. The task is a tremendous one because of the complexity of biochemical and biological interactions and their innumerable interdependencies. The key to many of the problems lies probably in the submicroscopic field. For, as one scientist has put it, "Atoms and molecules tend to mean very little in themselves; it is the way in which they are put together that really matters."

The symposium will be of very great value to anyone specifically interested in scientific research in the field of radiation biology.

G. K. Duschak, M.D.

**Physiologic Principles of Surgery.** Edited by Leo M. Zimmerman, M.D., and Rachmiel Levine, M.D. Fifty Contributors. Price, $15.00. Pp. 988, ilillustrated. Philadelphia: Saunders, 1957.

The past 25 years have been the era for the development of physiologic surgery. A major part of the surgical journals is devoted to articles on physiologic and chemical alterations associated with disease and with surgery.

An understanding of surgical physiology is as important to the surgeon as is the knowledge of anatomic derangements and surgical technics. There have been a moderate number of books in the past few years on fluids, electrolytes, and nutrition, but few on physiologic principles in surgery.

This text, therefore, edited by Zimmerman and Levine, is a most welcome book for every surgeon—whether in training, teaching, or in clinical practice. There are some 50 contributors, each well versed in his particular field, and many of whom are well-known names to those who have read and followed the physiologic research during the past 10 to 15 years.

The 36 separate chapters lend themselves to easy reference. Many chapters are well documented by charts and tables. All chapters have excellent references for further study. Of particular note were the chapters on "Metabolic Changes Associated with Injury," "Infections and Antibiotics," "Thermal and Radiation Injuries," "Pain," "The Liver," "The Bile Tract," "The Pancreas," and the "Kinetic Aspect of the Physiology of the Locomotor System."

"Physiologic Principles of Surgery" is one of the first and, by far, one of the best texts on the physiologic problems associated with surgery. It is recommended as a part of the every-day library of trainees and practicing surgeons, either clinical or teaching.

I, for one, am happy to have this book in my library, and already reference to this text on a few occasions has helped me with current questions which arose in my every-day practice of clinical surgery.

Jacob J. Weinstein, M.D.

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# MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA

## VOLUME XXVI, 1957

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